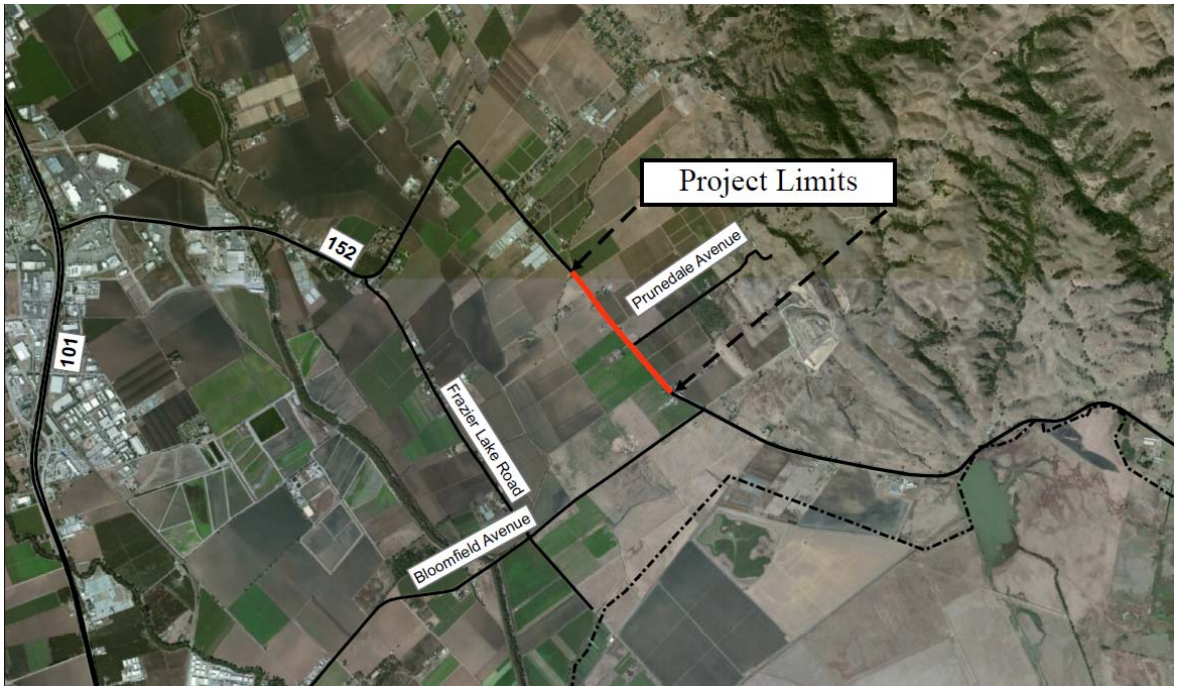
State Route 152 Shoulder Widening Project

SANTA CLARA COUNTY, CALIFORNIA
DISTRICT 4 – SCL – 152 (PM 13.8/14.7)
1G8700/0400020620

Initial Study with Mitigated Negative Declaration/Environmental Assessment with Finding of No Significant Impact



Prepared by the
State of California Department of Transportation

The environmental review, consultation, and any other action required in accordance with applicable federal laws for this project is being, or has been, carried-out by Caltrans under its assumption of responsibility pursuant to 23 USC 327.

June 2015

General Information about This Document

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Revisions to the IS/EA made after the public review period are indicated by a vertical line in the margin of the IS/EA text, similar to the one shown to the left of this paragraph.

SCH#: 2014092052
04-SCL-152-PM 13.8/14.7
1G870/0400020620

Widen shoulders and improve existing ditch along State Route 152 from 0.6 miles west of Prunedale Avenue to 0.24 mile east of the Prunedale Avenue intersection in Santa Clara County near the City of Gilroy

Initial Study with Mitigated Negative Declaration/Environmental Assessment

Submitted Pursuant to: (State) Division 13, California Public Resources Code
(Federal) 42 USC 4332(2)(C)

THE STATE OF CALIFORNIA
Department of Transportation

June 24 - 2015
Date of Approval

Bijan Sartipi
District Director
California Department of Transportation
NEPA and CEQA Lead Agency

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CALIFORNIA DEPARTMENT OF TRANSPORTATION
FINDING OF NO SIGNIFICANT IMPACT (FONSI)

FOR THE

State Route 152 Shoulder Widening

The California Department of Transportation (Department) has determined that the build alternative will have no significant impact on the human environment. This FONSI is based on the attached Environmental Assessment (EA) and supporting technical reports which have been independently evaluated by the Department and determined to adequately and accurately discuss the need, environmental issues, and impacts of the proposed project and appropriate mitigation measures. It provides sufficient evidence and analysis for determining that an Environmental Impact Statement is not required. The Department takes full responsibility for the accuracy, scope, and content of the attached EA and the supporting technical documents.

The environmental review, consultation, and any other action required in accordance with applicable Federal laws for this project is being, or has been, carried-out by the Department under its assumption of responsibility pursuant to 23 USC 327.

June 24, 2015
Date

BIJAN SARTIPI
District Director
California Department of Transportation, District 4

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SCH: 2014092052

MITIGATED NEGATIVE DECLARATION

Pursuant to: Division 13, Public Resources Code

Project Description

The California Department of Transportation (Department) proposes to improve roadway safety along State Route (SR) 152 from 0.6 miles west of Prunedale Avenue to 0.24 miles east of the Prunedale Avenue intersection by widening shoulders to standard 8-foot shoulders and improving the existing drainage ditch beyond the westbound shoulder of SR 152.

Determination

The Department has prepared an Initial Study for this project, and following public review, has determined from this study that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed project would have no effect on aesthetics, forest resources, air quality, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources, noise, population and housing, public services, recreation, transportation/traffic, and utilities and service systems.

In addition, the proposed project would have less than significant effects to agricultural resources.

With the following mitigation measures incorporated, the proposed project would have less than significant effects to biological resources:

- Wildlife Exclusion Fencing (WEF) will be installed around the perimeter of the construction area to prevent California tiger salamander (CTS) and California red-legged frog (CRLF) from entering the area.
- A Department-approved biological monitor will conduct pre-construction surveys and will be present daily during construction activities that may result in the take of CTS and CRLF.
- All work for the proposed project will be scheduled to occur between June 1 and October 15.

Melanie Brent

Melanie Brent
Deputy District Director
Office of Environmental Planning and Engineering
District 4
California Department of Transportation

6/24/15
Date

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Chapter 1 Proposed Project

1.1 Introduction

The California Department of Transportation (Department) proposes to improve roadway safety on a segment of State Route (SR) 152 in Santa Clara County from 0.6 miles west of Prunedale Avenue to 0.24 miles east of Prunedale Avenue. See Figures 1.1-1 and 1.1-2 for the project location and vicinity. The existing facility consists of 12-foot lanes in each direction of traffic, shoulder widths ranging from 1 to 8 feet, and a drainage ditch located beyond the westbound edge of shoulder.

SR 152 serves as an important interregional east-west link between the San Joaquin and Santa Clara Valleys. Within the project limits, SR 152 is a two-lane undivided highway set in a rural landscape.

This project is included in the Fiscal Year 2012 State Highway Operation and Protection Program (SHOPP). The Department is the lead agency for this project under the National Environmental Policy Act (NEPA) and under the California Environmental Quality Act (CEQA).

1.2 Purpose and Need

1.2.1 Project Purpose

The purpose of the project is to improve safety along SR 152 within the project limits by reducing the number of accidents caused by vehicles crossing the centerline and/or running off the road.

1.2.2 Project Need

A Project Study Report completed by the Department revealed there were a total of 71 accidents on SR 152 within the project limits between July 1, 2004, and June 30, 2012. Of the 71 accidents, 15 involved vehicles that collided with the existing drainage ditch on the westbound shoulder of SR 152. Motorists that drove into the drainage ditch were unable to regain control and drive back onto the roadway. Out of the 71 accidents, 19 involved vehicles that crossed the centerline.

Constructing the proposed improvements would upgrade the facility and mitigate future accidents by discouraging motorists from crossing the centerline and driving off the roadway. The improvements would allow motorists to regain control of their vehicles if they departed from the roadway and traveled into the drainage ditch.

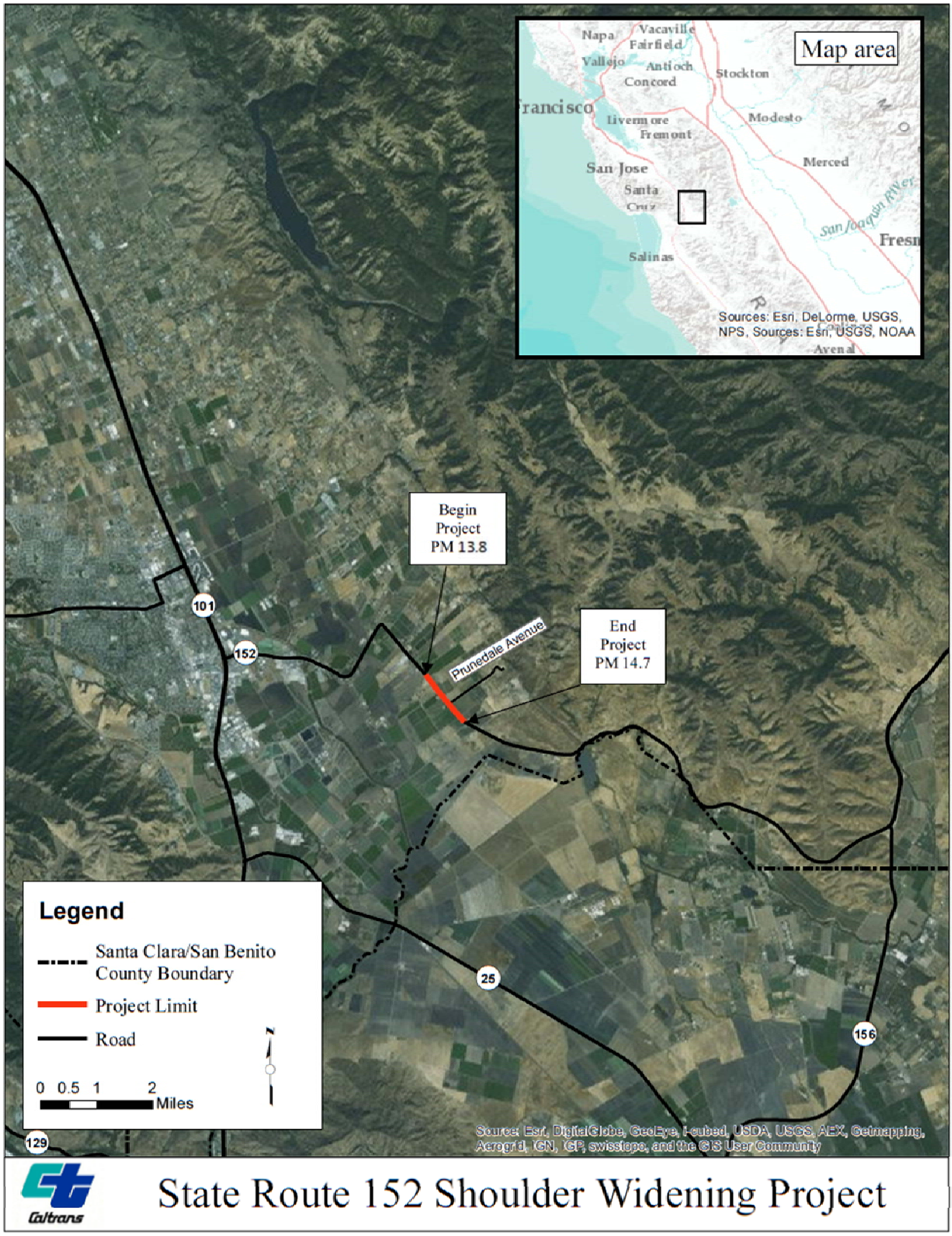


Figure 1.1-1: Project Location

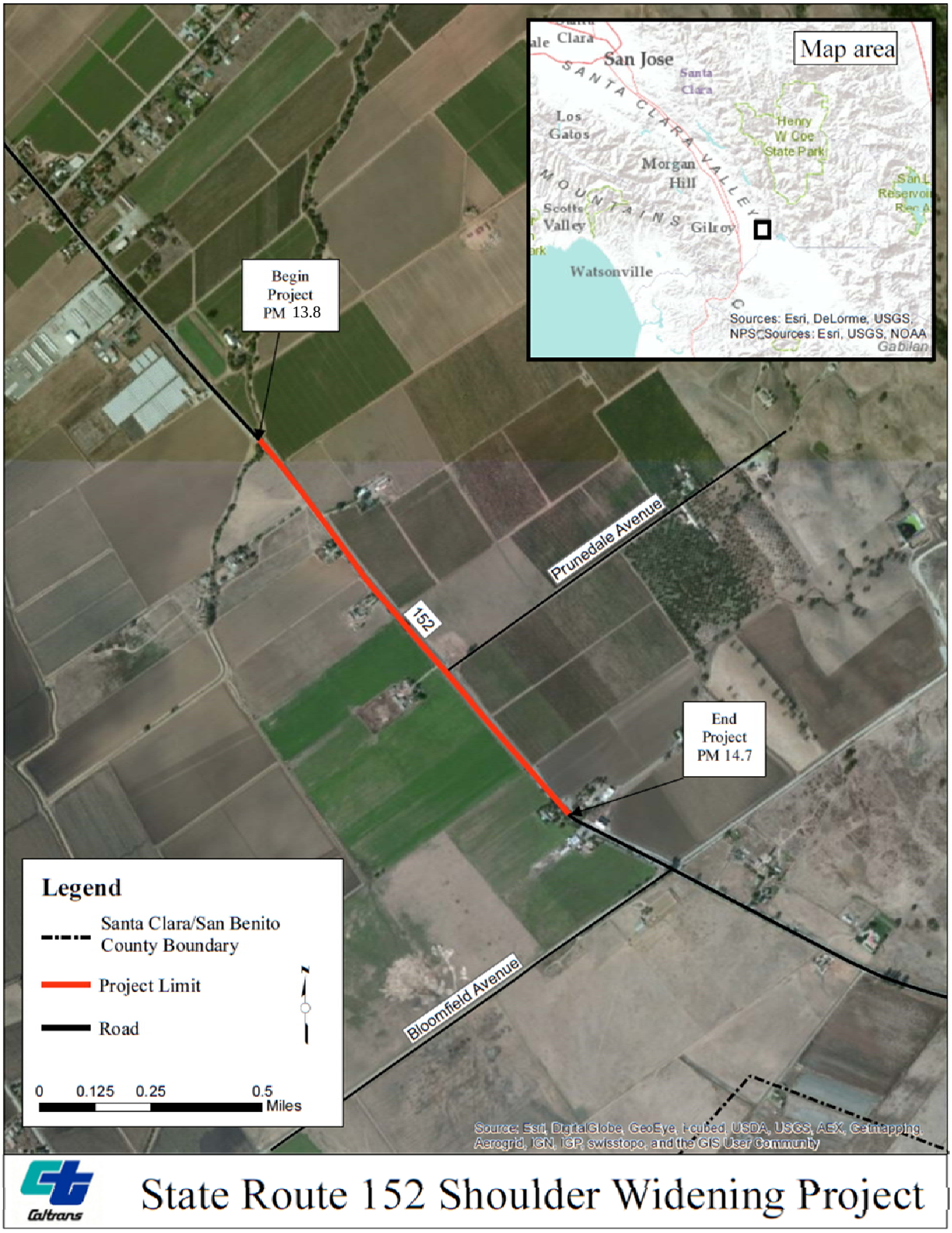


Figure 1.1-2: Project Vicinity

1.2.3 Independent Utility and Logical Termini

FHWA regulations require transportation projects meet the following criteria:

- Connect logical termini and be of sufficient length to address environmental matters on a broad scope. In other words, a project must have rational end points for a transportation improvement and rational end points for a review of environmental impacts.
- Have independent utility or independent significance (be usable and require a reasonable expenditure even if no additional transportation improvements in the area are made).
- Not restrict consideration of alternatives for other reasonable foreseeable transportation improvements.

The limits of this safety project were defined by an investigation that revealed a concentration of accidents within the corridor on SR 152. The project would not result in a need for future improvements to adjacent highway segments, and would not prevent consideration of similar improvements along other segments of the highway in the future.

1.3 Project Description

This section describes the proposed action and the project alternatives that were developed to meet the identified purpose and need of the project, while avoiding or minimizing environmental impacts. Two alternatives were considered in this document: a Build Alternative and the No Build Alternative.

The project is located in Santa Clara County on SR 152 from 0.6 miles west of Prunedale Avenue to 0.24 miles east of Prunedale Avenue. The total length of the project is 0.9 miles. Within the limits of the proposed project, SR 152 is a two-lane undivided, conventional highway with one 12-foot wide lane of traffic in each direction, 1 to 8-foot non-standard shoulders, and a non-recoverable drainage ditch along the westbound shoulder (Figure 1.3-1). The purpose of the project is to improve safety by reducing the number of cross-centerline and/or run-off-the-road accidents along this highway corridor. The project is needed because an eight-year investigation revealed that a total of 71 accidents had occurred within the project limits involving vehicles crossing the centerline and running off the road into the non-recoverable drainage ditch.

To construct the project, the Department will acquire new right of way (Figures 1.3-2 and 1.3-3) and temporary construction easements for construction throughout the project area.

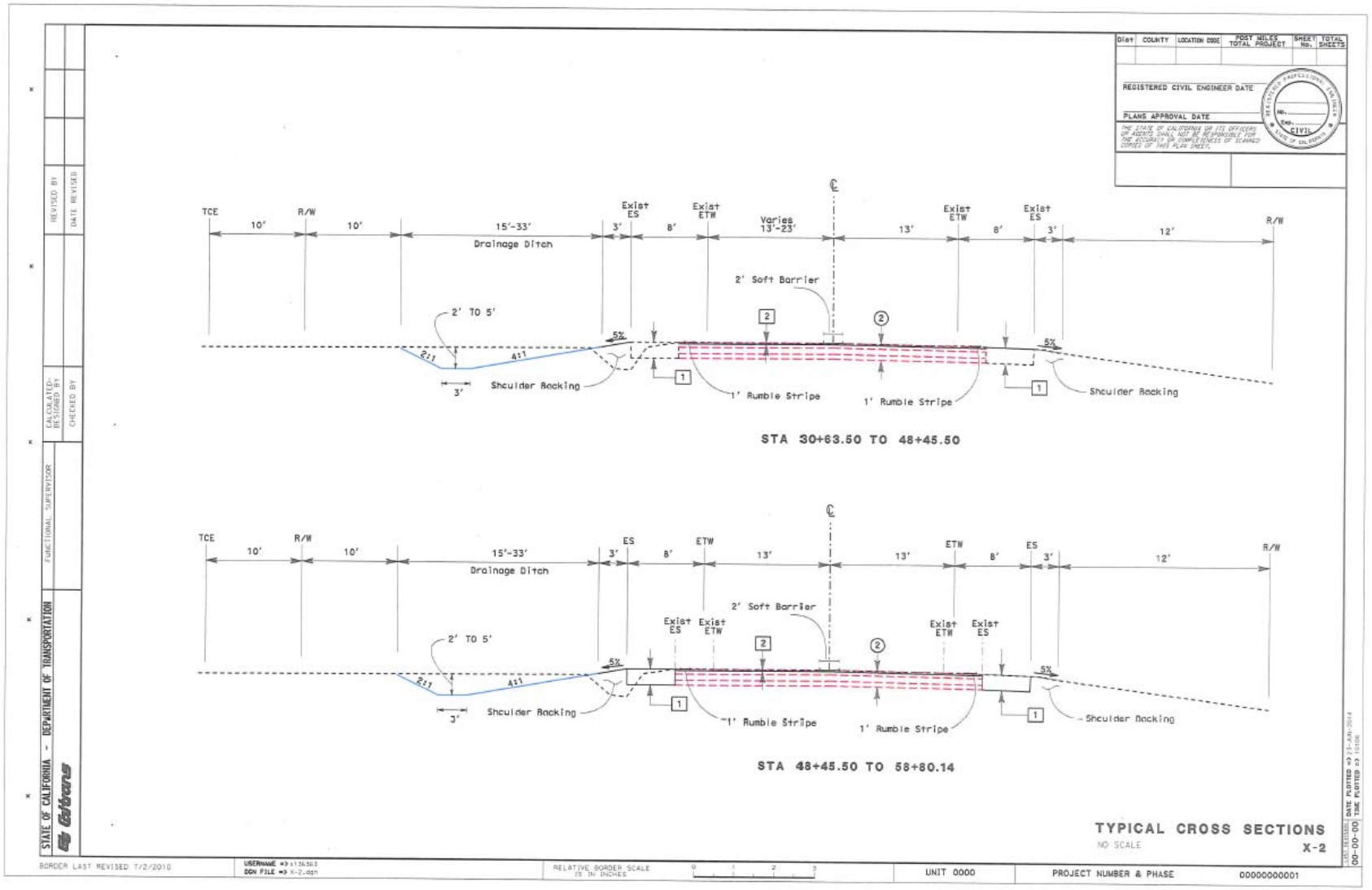


Figure 1.3-1: Typical Cross Section

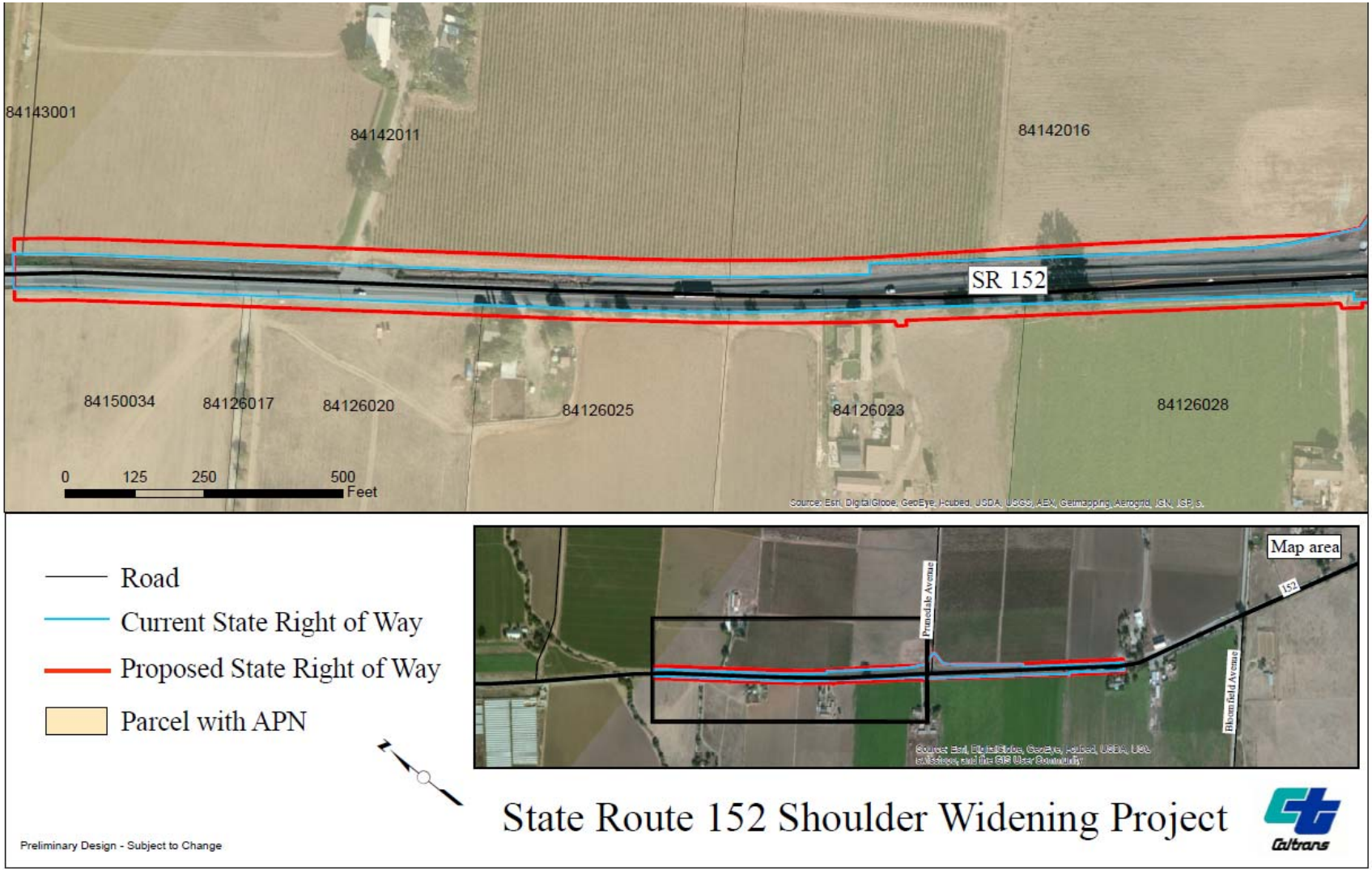


Figure 1.3-2: Proposed Right of Way Map – Detail 1

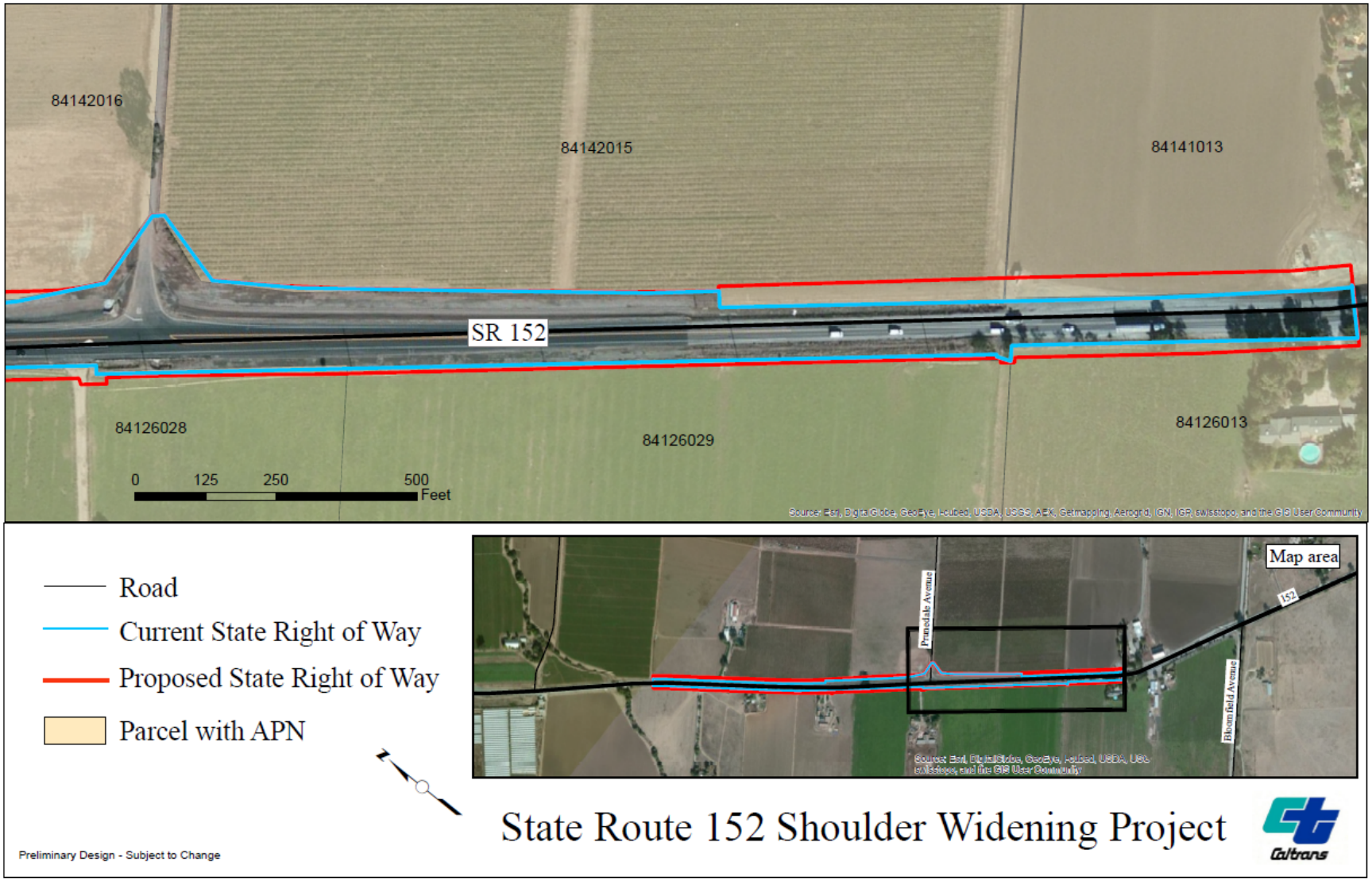


Figure 1.3-3: Proposed Right of Way Map – Detail 2

1.3.1 Proposed Build Alternative

The Build Alternative would widen the current shoulders to standard 8-foot paved shoulders on both sides of SR 152, place rumble strips within the widened shoulders, and construct a soft median barrier (safety rumble strip) in the centerline within the project limits. There are several segments within the project limits that have existing 8 foot shoulders. These shoulders are already up to the Department's standards and would only be widened a maximum of 2 feet to accommodate the soft median barrier. At this phase in the project process, no trees are anticipated to be cut down.

An approximate 20-foot Clear Recovery Zone (CRZ) will be established by relocating existing utility poles. The existing roadway will also be repaved within the project limits. The Department is proposing to acquire a total of approximately 2.62 acres of right of way on both sides of SR 152.

1.3.1.1 Drainage Repairs

Within the project limits, there would be several drainage repairs and relocations. The existing unlined drainage ditch along the westbound side of SR 152 will be removed and replaced approximately 11 feet from the edge of the roadway. The new drainage ditch will be widened and have less steep slopes to allow motorists that drive into the ditch to recover back onto the roadway. Repairs to the existing drainage culverts will be made, include adding, extending, cleaning, and/or replacing concrete box culverts and pipes.

1.3.1.2 Equipment Staging

A proposed staging location has been identified approximately 1,200 feet east from Prunedale Avenue along the westbound shoulder of SR 152. The proposed staging location would extend approximately 400 feet along SR 152 and approximately 40 feet from the edge of the roadway.

1.3.2 No Build Alternative

The No Build Alternative would not construct any improvements to SR 152.

1.3.3 Identification of a Preferred Alternative

The Build Alternative was chosen as the preferred alternative for this project by the Project Development Team (PDT) on February 24, 2015 because the build alternative best meets the purpose and need of the project. The proposed improvements would discourage motorists to cross the centerline and/or drive off the roadway, and allow motorists to regain control if their vehicles depart from the travel lanes.

1.3.4 Permits and Approvals Needed

The following permits, reviews, and approvals would be required for project construction:

Agency	Permit/Approval	Status
United States Fish and Wildlife Service	Section 7 Consultation for Threatened and Endangered Species/Biological Opinion	A Biological Opinion (Appendix I) was issued on June 18, 2015.
California Department of Fish and Wildlife	Incidental Take Permit for California tiger salamander and California red-legged frog	The permit application will be completed and submitted during the design phase of this project.
California Department of Conservation	Notice of public acquisition of farmlands protected under Williamson Act	Notice sent on February 5, 2014. Department of Conservation replied on March 17, 2014. Department will provide notification within ten days of property acquisition.
U.S. Department of Agriculture	Form AD-1006	Form AD-1006 (Appendix D) completed on February 21, 2014. No further actions required.

Table 1.3-1: Permits and Approvals Needed

Chapter 2 Affected Environment, Environmental Consequences, and Avoidance, Minimization, and/or Mitigation Measures

As part of the scoping and environmental analysis carried out for the project, the following environmental issues were considered but no adverse impacts were identified. As a result, there is no further discussion about these issues in this document:

Existing and Future Land Use – The project does not affect existing or future land uses and will not alter community interaction patterns. The project would acquire 2.62 acres of farmland from several properties.

Consistency with State, Regional, and Local Plans and Programs – The project is consistent with state, regional and local plans, transportation plans and programs.

Coastal Zone – This project is not within the coastal zone.

Wild and Scenic Rivers – There are no National or California Designated Wild and Scenic Rivers in or adjacent to the project area.

Parks and Recreational Facilities – There are no parks or recreational facilities affected by the project. The project would not directly or indirectly affect a Section 4(f) public park, recreational area, or wildlife or waterfowl refuge.

Growth – This project is a safety project and will not add capacity to the highway, and therefore will not induce growth in the surrounding area.

Timberlands – There are no timberlands in or adjacent to the project area.

Community Character and Cohesion – Although this project proposes to acquire land, it will not displace or relocate residents, change existing community boundaries, physically divide an established community, or create a new barrier to movement within the project area.

Relocations and Real Property Acquisition – Although this project proposes to acquire land, it will not displace or relocate any residents.

Environmental Justice – This project will not cause disproportionately high and adverse effects on any minority or low-income populations because the nature of the project is to provide safety to all motorists along SR 152.

Traffic and Transportation/Pedestrian and Bicycle Facilities – This project will not be adding lanes and will not be modifying the existing alignment of the roadway. Therefore, there will be no traffic impacts.

Hydrology and Floodplains – A Floodplain Encroachment Evaluation was completed March 17, 2014 which determined that the project is not within the Special Flood Hazard areas. The project will not encroach upon a 100-year floodplain and will not impact natural and beneficial floodplain values.

Geology/Soils/Seismic/Topography – This project does not include any structures or topographic and geologic features. There are no geology, soils, or seismic concerns as they relate to public safety and project design.

Paleontology – Based on an investigation done on April 22, 2014 there are no impacts on any sensitive paleontological resources because of the shallow nature of the proposed excavation and previous disturbance from other projects' excavation activities.

Air – This project is exempt from air quality conformity requirements per 40 CFR 93.126.

Noise – This project does not qualify as a Type 1 project, therefore no further noise analysis is required.

Plant Species –Based on reconnaissance surveys conducted for the proposed project, no suitable habitat was determined to be present for listed plants. The project location is not located in or near suitable habitats for these species, and no incidental observations were noted during reconnaissance surveys; thus, no effects on special-status plant species will occur.

2.1 Human Environment

2.1.1 Farmlands

2.1.1.1 Regulatory Setting

The National Environmental Policy Act (NEPA) and the Farmland Protection Policy Act (FPPA, 7 United States Code [USC] 4201-4209; and its regulations, 7 Code of Federal Regulations [CFR] Part 658) require federal agencies, such as the Federal Highway Administration (FHWA), to coordinate with the Natural Resources Conservation Service (NRCS) if their activities may irreversibly convert farmland (directly or indirectly) to nonagricultural use. For purposes of the FPPA, farmland includes prime farmland, unique farmland, and land of statewide or local importance.

The California Environmental Quality Act (CEQA) requires the review of projects that would convert Williamson Act contract land to non-agricultural uses. The main purposes of the Williamson Act are to preserve agricultural land and to encourage open space preservation and efficient urban growth. The Williamson Act provides incentives to landowners through reduced property taxes to discourage the early conversion of agricultural and open space lands to other uses.

2.1.1.2 Affected Environment

The proposed project location is located in an area with the following designations under the FPPA: prime, statewide important, locally important, and grazing farmland (See Figures 2.1-1 and 2.1-2). There are also several properties under Williamson Act contracts that are considered prime and non-prime farmland within the project area (See Figures 2.1-3 and 2.1-4)

2.1.1.3 Environmental Consequences

The Department proposes to acquire approximately 2.62 acres of land to accommodate the proposed work. See Table 2.1-1 for a breakdown of the 2.62 acres of land proposed to be converted to non-agricultural use. Within the 2.62 acres there are seven properties that are considered prime farmland under the Williamson Act, totaling approximately 1.39 acres.

Land Converted (Acres)	Prime and Unique Farmland (Acres)	Statewide and Local Important Farmland (Acres)	Percentage of Farmland in County	Farmland Conversion Impact Rating
2.62	1.6	1.02	0.001	174

Table 2.1-1: Farmland Conversion

The land acquired will be used to relocate and repair the existing drainage ditch on the westbound shoulder of SR 152 and to create a 20-foot Clear Recovery Zone for the safety of the motorists. There will be ground disturbance, excavation, and vegetation removal on the land acquired.

Form AD-1006, maps, and a transmittal letter were drafted and sent to the U.S. Department of Agriculture (USDA) on January 31, 2013 for their review. The Department received form AD-1006 from USDA on February 19, 2014. The form was completed February 21, 2014 with a Farmland Conversion Impact Rating of 174 out of 260. The Department notified USDA of its findings.

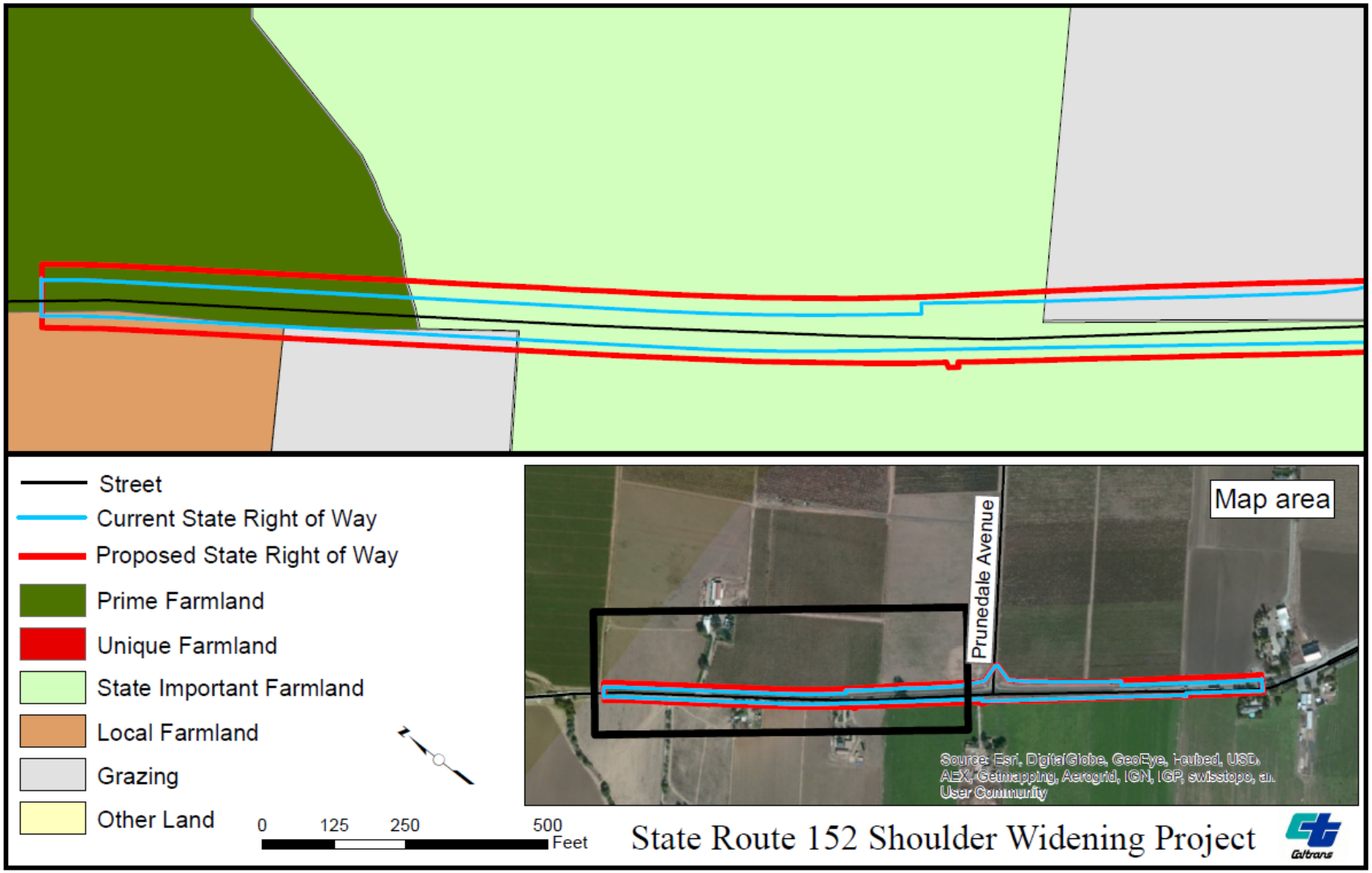


Figure 2.1-1: FPPA Farmland Map – Detail 1

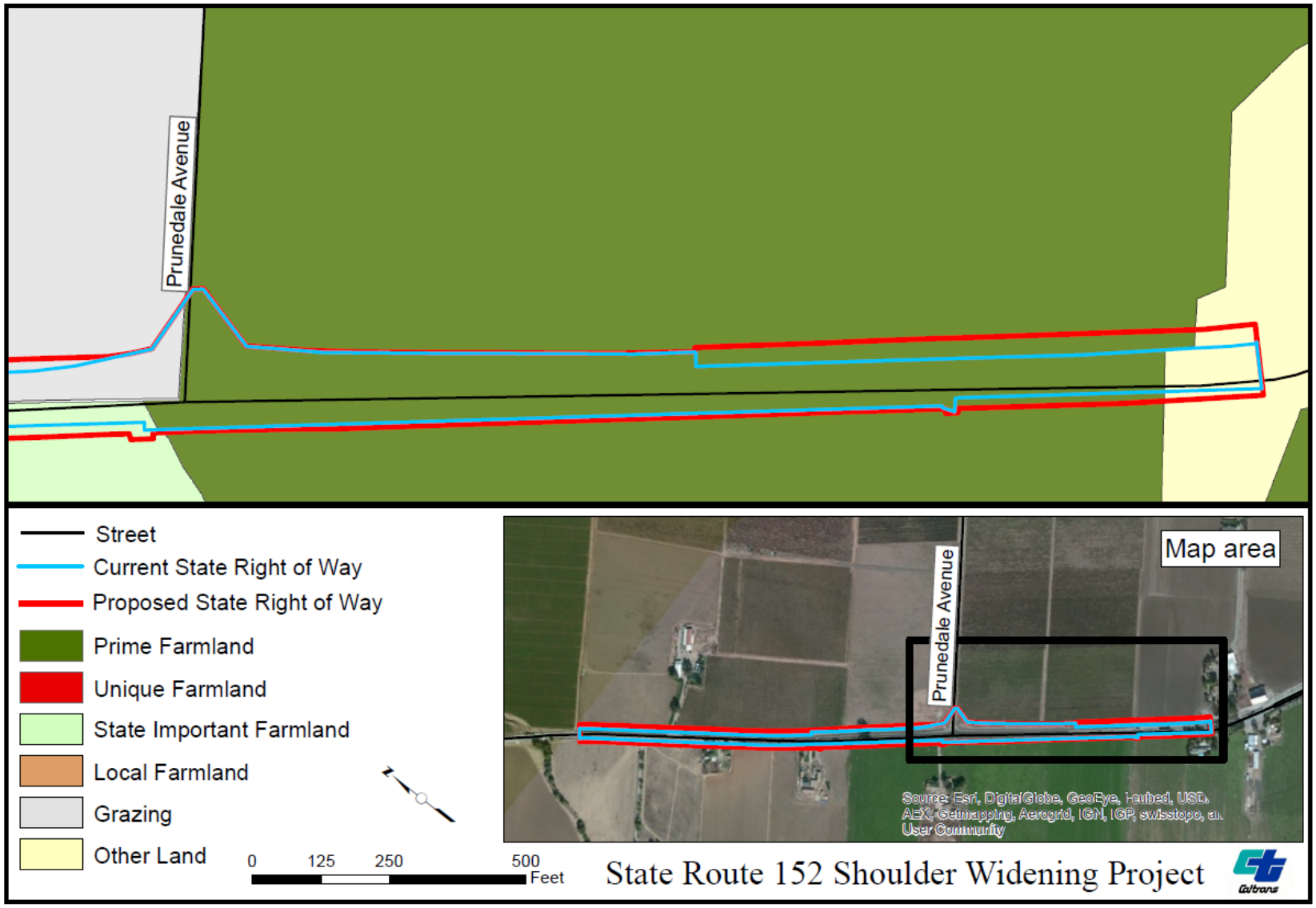


Figure 2.1-2: FPPA Farmland Map – Detail 2

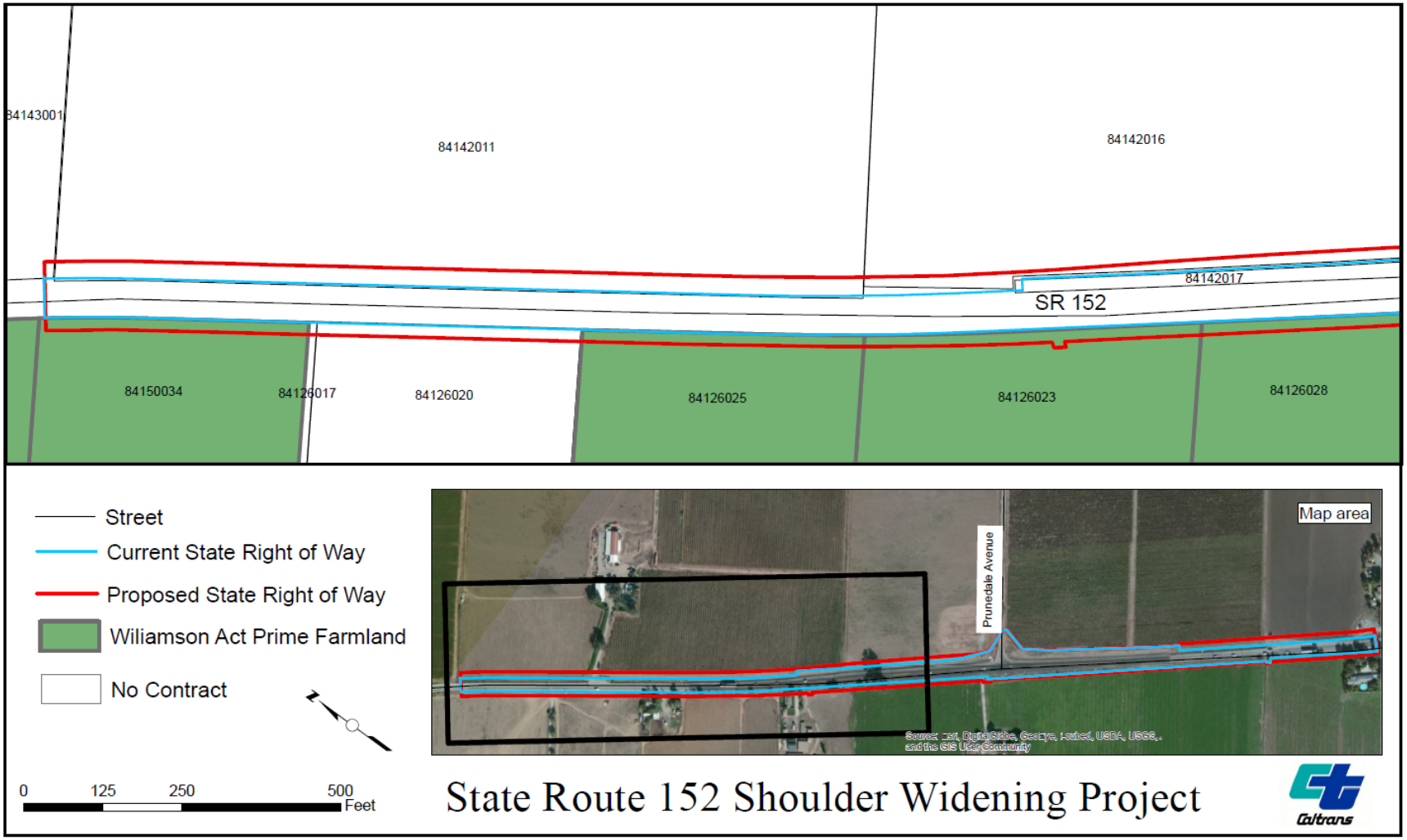


Figure 2.1-3: Williamson Act Farmland Map – Detail 1

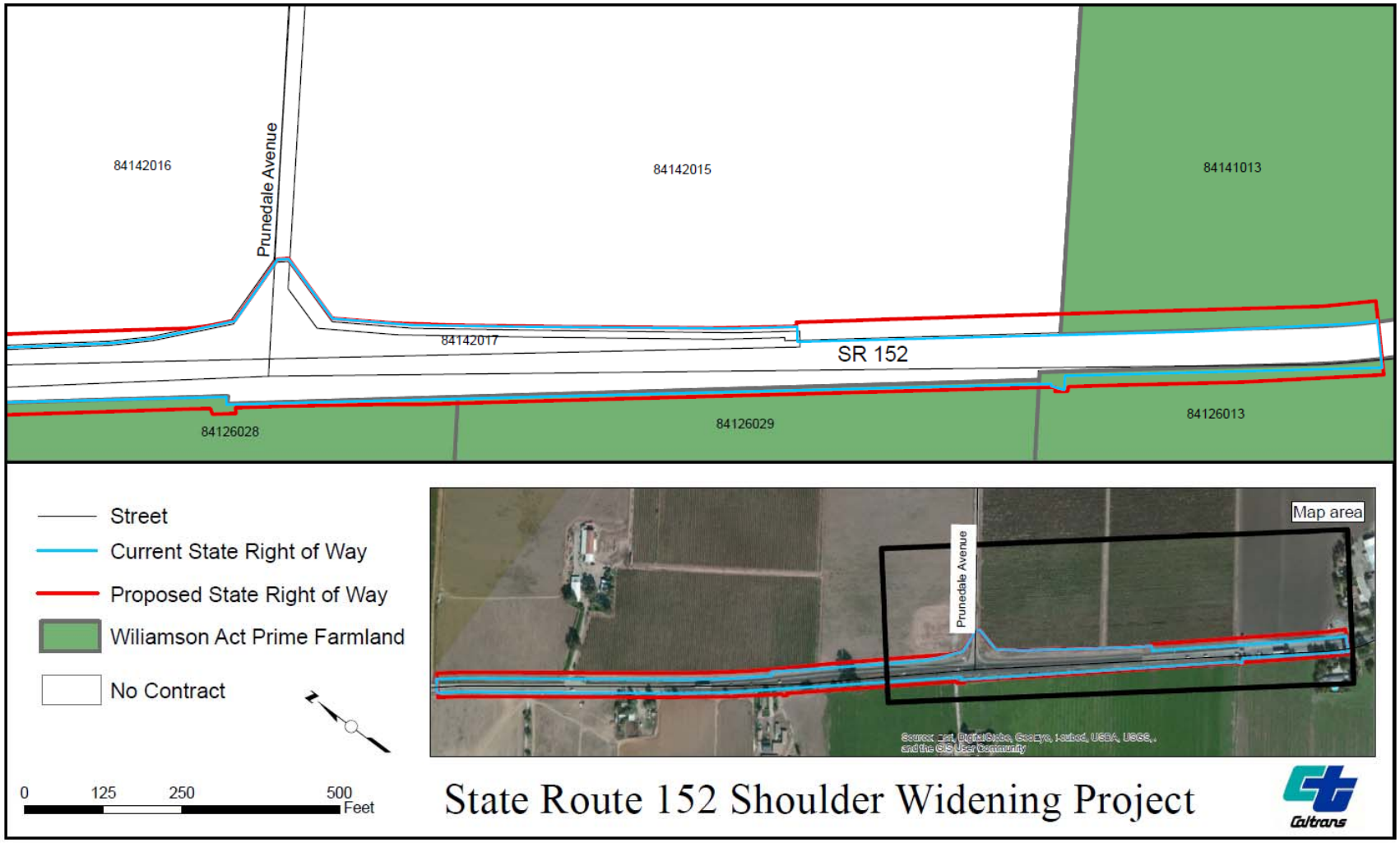


Figure 2.1-4: Williamson Act Farmland Map – Detail 2

Although this score is relatively high, the project is a safety project for a specific segment of SR 152 and no other locations are sufficient to address the need of the project. See Appendix D for the completed Form AD-1006.

The California Department of Conservation (DOC) was notified of the proposed farmland acquisition on February 5, 2014 (Appendix F). On March 18, 2014 the Department received a letter from the California Department of Conservation with their comments and recommendations for the Department's actions (Appendix E). The Department was recommended to provide notice to the Department of Conservation within 10 days of the property being acquired. The lower cost of the Williamson Act property was not the primary consideration to acquire the land.

No other locations were reasonably feasible for the safety improvement project. The proposed design of the project is based on construction needs and safety requirements, not on cost.

The No Build alternative would not acquire any farmland and therefore would not have impacts

2.1.1.4 Avoidance, Minimization, or Mitigation Measures

Since this project is not expected to result in adverse farmland impacts, avoidance, minimization, or mitigation measures are not required.

2.1.2 Utilities/Emergency Services

2.1.2.1 Affected Environment

There are approximately four electrical poles within the project area along the eastbound shoulder of SR 152. These poles are owned by Pacific Gas and Electric (PG&E) poles and have both electric and AT&T telecommunication lines attached to the poles.

2.1.2.2 Environmental Consequences

The build alternative would relocate the existing utility poles at the edge of the new proposed right of way, approximately 20 feet from the edge of travel way to establish a 20-foot Clear Recovery Zone (CRZ). There are no associated impacts to the utility pole relocations.

Access to the roadway by emergency services, such as law enforcement and fire departments, may be temporarily affected during construction of the project. A Traffic Management Plan will be completed during the design phase and may include nighttime work and one-way traffic control. There will be no long-term impacts to the utilities and emergency services.

The no build alternative would not relocate existing utility poles or temporarily effect emergency services.

2.1.2.3 Avoidance, Minimization, and/or Mitigation Measures

None required.

2.1.3 Visual/Aesthetics

2.1.3.1 Regulatory Settings

The National Environmental Policy Act of 1969 as amended (NEPA) establishes that the federal government use all practicable means to ensure all Americans safe, healthful, productive, and *aesthetically* (emphasis added) and culturally pleasing surroundings (42 United States Code [USC] 4331[b][2]). To further emphasize this point, the Federal Highway Administration (FHWA) in its implementation of NEPA (23 USC 109[h]) directs that final decisions on projects are to be made in the best overall public interest taking into account adverse environmental impacts, including among others, the destruction or disruption of aesthetic values.

The California Environmental Quality Act (CEQA) establishes that it is the policy of the state to take all action necessary to provide the people of the state "with…enjoyment of *aesthetic,* natural, scenic and historic environmental qualities" (CA Public Resources Code [PRC] Section 21001[b]).

2.1.3.2 Affected Environment

The portion of SR 152 where the project is located is not part of the State Scenic Highway system and is not listed as a scenic road in the Santa Clara County General Plan. The land in the vicinity of the proposed project is flat and not heavily developed. It features primarily agricultural land uses, characterized by open pastures or cultivated crop fields. Consequently, few trees are present. These trees vary in size but are mostly small, widely spaced, and have no significant visual features. There are approximately five private residences along SR 152 within the project limits. The homes are widely spaced with some being set back from the highway. The residential lots typically feature landscaping that includes trees and shrubs, sometimes extending to the property line along the highway. There is no Department landscaping in the project limits. Overhead utility lines, strung on wood poles, run parallel to the eastbound side of the highway within the project area.

2.1.3.3 Environmental Consequences

Scenic resources such as unique or outstanding trees, rock outcrops, historic buildings, or other structures would not be adversely affected by the proposed project. The project would not block or disrupt existing views or vistas, adversely affect visual quality or visual character of the project site or surrounding area in substantial way, or result in a substantial permanent increase

in light and glare. As seen from the highway and roadside area, the project would result in minor recognizable changes. These changes would not degrade the appearance of the project setting or create unsightly conditions. Therefore, the project, once completed, would not result in a negative effect to the visual quality of the project area.

During the three to four month construction period, equipment and materials stored in the staging area near the roadway would be visible to the public. Similarly, temporary K-rail and wildlife exclusion fencing would be seen, as would ongoing shoulder widening and ditch relocation operations. Portable flood lighting and changeable message signs would appear along the roadside. The presence of these features would have a short-term, visual impact lasting the duration of the construction period.

The no build alternative would not make improvements to SR 152 and therefore would not impact visual resources.

2.1.3.4 Avoidance, Minimization, and/or Mitigation Measures

1. Flood lighting for night work should be placed and adjusted such that light is cast downward and confined to the immediate work area. Lights should be shielded to prevent stray light.

2.1.4 Cultural Resources

2.1.4.1 Regulatory Setting

The term “cultural resources” as used in this document refers to all “built environment” resources (structures, bridges, railroads, water conveyance systems, etc.), culturally important resources, and archaeological resources (both prehistoric and historic), regardless of significance. Laws and regulations dealing with cultural resources include:

The National Historic Preservation Act (NHPA) of 1966, as amended, sets forth national policy and procedures for historic properties, defined as districts, sites, buildings, structures, and objects included in or eligible for listing in the National Register of Historic Places. Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and to allow the Advisory Council on Historic Preservation the opportunity to comment on those undertakings, following regulations issued by the Advisory Council on Historic Preservation [36 Code of Federal Regulations (CFR) 800]. On January 1, 2014, an amended Section 106 Programmatic Agreement (PA) between the Advisory Council, the Federal Highway Administration (FHWA), State Historic Preservation Officer (SHPO), and the Department went into effect for Department projects, both state and local, with FHWA involvement. The PA implements the Advisory Council’s regulations, 36 CFR 800, streamlining

the Section 106 process and delegating certain responsibilities to the Department. The FHWA's responsibilities under the PA have been assigned to the Department as part of the Surface Transportation Project Delivery Program (23 United States Code [USC] 327).

Historic properties may also be covered under Section 4(f) of the U.S. Department of Transportation Act, which regulates the "use" of land from historic properties. See Appendix B for specific information about Section 4(f).

Historical resources are considered under the California Environmental Quality Act (CEQA), as well as CA Public Resources Code (PRC) Section 5024.1, which established the California Register of Historical Resources. PRC Section 5024 requires state agencies to identify and protect state-owned resources that meet the National Register of Historic Places listing criteria. It further specifically requires the Department to inventory state-owned structures in its rights-of-way. Sections 5024(f) and 5024.5 require state agencies to provide notice to and consult with the State Historic Preservation Officer (SHPO) before altering, transferring, relocating, or demolishing state-owned historical resources that are listed on or are eligible for inclusion in the National Register or are registered or eligible for registration as California Historical Landmarks.

2.1.4.2 Affected Environment

For the purposes of the cultural resource analysis, a Historic Property Survey Report (HPSR), an Archaeological Survey Report (ASR), and an Environmentally Sensitive Area (ESA) Action plan were completed on June 10, 2014. Field surveys were completed on May 8, 2014. A records search was conducted at the Northwest Information Center at Sonoma State University on June 2, 2014. The National Register of Historic Places, California Register of Historic Places, California Inventory of Historic Resources, California Historical Landmarks, California Points of Historical Interest, California Historical Resources Information System, Caltrans Historic Highway Bridge Inventory, and the Caltrans Cultural Resources Database were also searched. The City of Gilroy, Santa Clara County, The California Pioneers' Society of Santa Clara County, Santa Clara County Historical and Genealogical Society, Heritage Council of Santa Clara County, History San Jose, and the Gilroy Historical Museum were contacted in March 2014 for potential built resource identification. None of the above organizations responded with comments.

The Department contacted the Native American Heritage Commission (NAHC) on February 19, 2014, requesting a review of their Sacred Lands file to determine if there were known historically significant sites within or near the APE of the proposed project. The NAHC responded on February 27, 2014 and reported no Native American cultural resources in the project area. A list of individuals was also provided by the NAHC and they were contacted by letter and phone. No comments were received by these individuals.

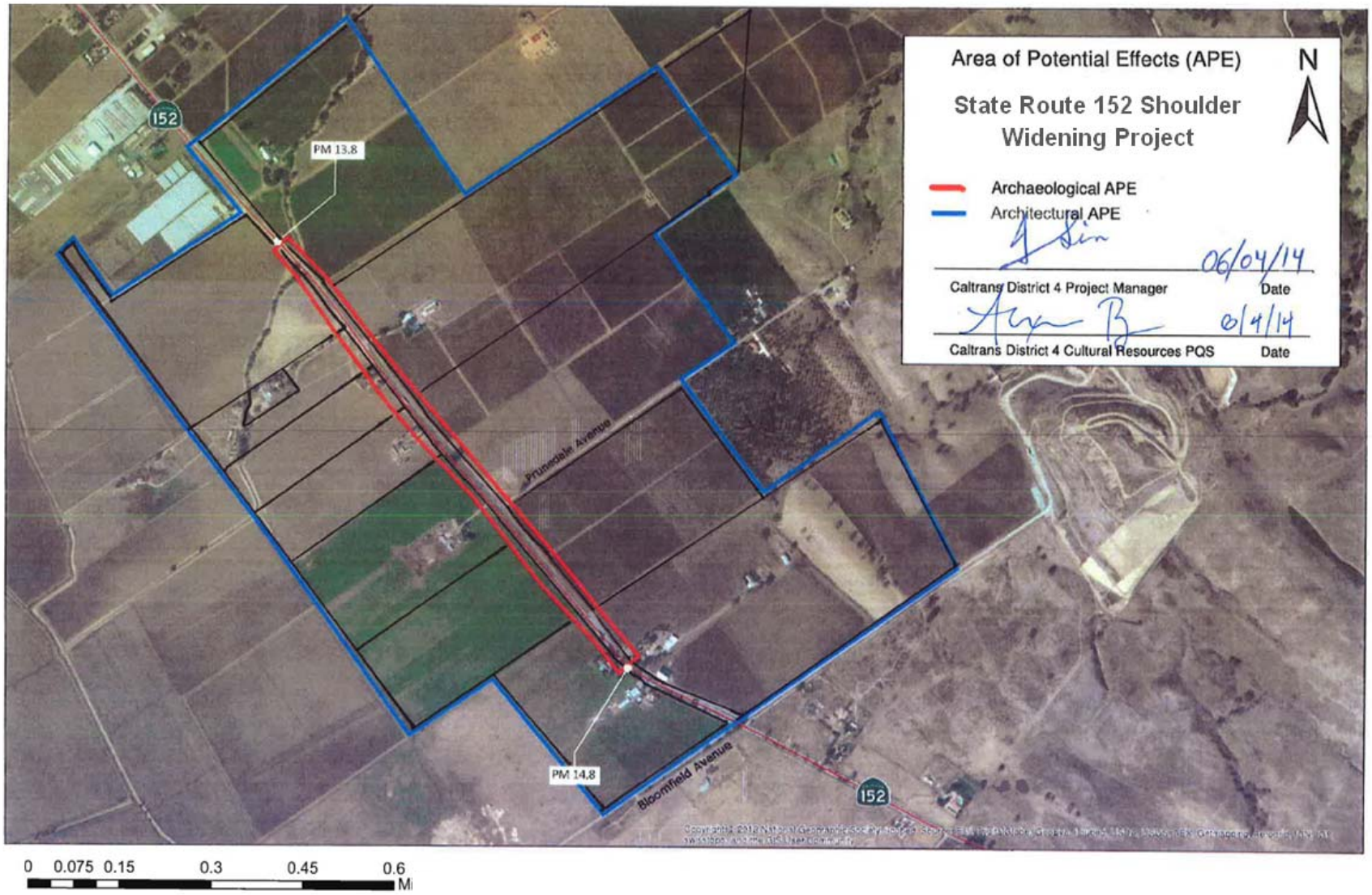


Figure 2.1-5: Area of Potential Effects (APE)

Area of Potential Effects

The archaeological Area of Potential Effects (APE) for the project includes any locations where construction and ground disturbing activities will take place, including staging areas, and utility pole relocation (Figure 2.1-5). All construction areas are included in both the archaeological and architectural history APEs. The vertical APE includes areas where grading, vegetation removal, shoulder backing, ditch excavation, and utility pole relocation will occur. Most of the project area will have a vertical APE of three feet. However, in areas where utility poles, and the ditch will be constructed, the project area will have a vertical APE of five to six feet below ground surface. The architectural APE includes 13 parcels where project activities could directly or indirectly cause impacts to built resources. Affected parcels are those that contain right of way acquisitions, construction activities and staging areas, relocation of utilities, Temporary Construction Easements (TCE), and parcels impacted by indirect visual impacts

Eligible Historic Property - Eschenburg-Silva Barn

The Eschenburg-Silva Barn at 3665 Pacheco Pass Highway (APN 841-41-013) was determined by the Department as eligible for the National Register of Historic Places in 1992. The property is locally significant under Criterion A for its association with the dairy industry in the Gilroy-San Felipe vicinity. It may additionally be eligible under Criterion C, as a "distinguished example of type and method of construction of an early heavy-timber barn in California." In 1992, the barn was the only contributing feature while the house and outbuildings were found to be non-contributing features. The State Historic Preservation Officer concurred with this finding in June 1994. The barn is also identified as a historical resource for the purposes of CEQA because it meets the California Register of Historical Resources criteria.

The Department visited the property to document its current condition and found it in a similar state as when originally recorded in 1992. Two additional buildings, a secondary residence and a barn, have been constructed at the far rear of the property since the previous evaluation in 1992. The barn remains in good condition and continues to retain its integrity of design and the feeling from the period of significance despite the changes to surrounding structures on the property. The barn remains to be the only existing structure dating from the period of significance (1853 to 1890), and is therefore the only element contributing to the eligible property.

2.1.4.3 Environmental Consequences

The Department has determined that there will be No Adverse Effect to the eligible historic property (Eschenburg-Silva Barn) because potential effects will be avoided by designation and enforcement of Environmentally Sensitive Areas (ESA), per the Section 106 PA. Therefore, consultation with the State Historic Preservation Officer is not required.

The barn is considered a Section 4(f) resource because of its eligibility as a historic resource, however there will be no use of the resource. See Appendix B for more information on the findings of the Section 4(f) resource.

The no build alternative would not make improvements to SR 152 and therefore would not impact cultural resources.

2.1.4.4 Avoidance, Minimization, and/or Mitigation Measures

1. The Eschenburg-Silva Barn shall be protected by an ESA delineation. No project-related activities (maintenance, equipment parking, construction staging, etc.) shall take place within the designated ESA (Figure 2.1-6).

2. Prior to construction, the ESA will be established with Temporary Fencing (Type ESA) along the boundary of the TCE proposed at the northwest end of the 3665 Pacheco Pass Highway property. The Temporary Fence will continue east along the Department's right of way to the edge of the property owner's driveway entrance.

3. The ESA shall not block the driveway, located immediately north of SR 152, used by the property owners at 3665 Pacheco Pass Highway. The ESA will surround the entire staging area to prevent contact between construction equipment and the area containing the historic barn.

4. If human remains are discovered, State Health and Safety Code Section 7050.5 states that further disturbances and activities shall stop in any area or nearby area suspected to overlie remains, and the County Coroner contacted. Pursuant to CA Public Resources Code (PRC) Section 5097.98, if the remains are thought to be Native American, the coroner will notify the Native American Heritage Commission (NAHC), which will then notify the Most Likely Descendent (MLD). At this time, the person who discovered the remains will contact the Department's District Archaeological Branch Chief so that they may work with the MLD on the respectful treatment and disposition of the remains. Further provisions of PRC 5097.98 are to be followed as applicable.

5. If cultural materials are discovered during construction, all earth-moving activity within and around the immediate discovery area will be diverted until a qualified archaeologist can assess the nature and significance of the find.

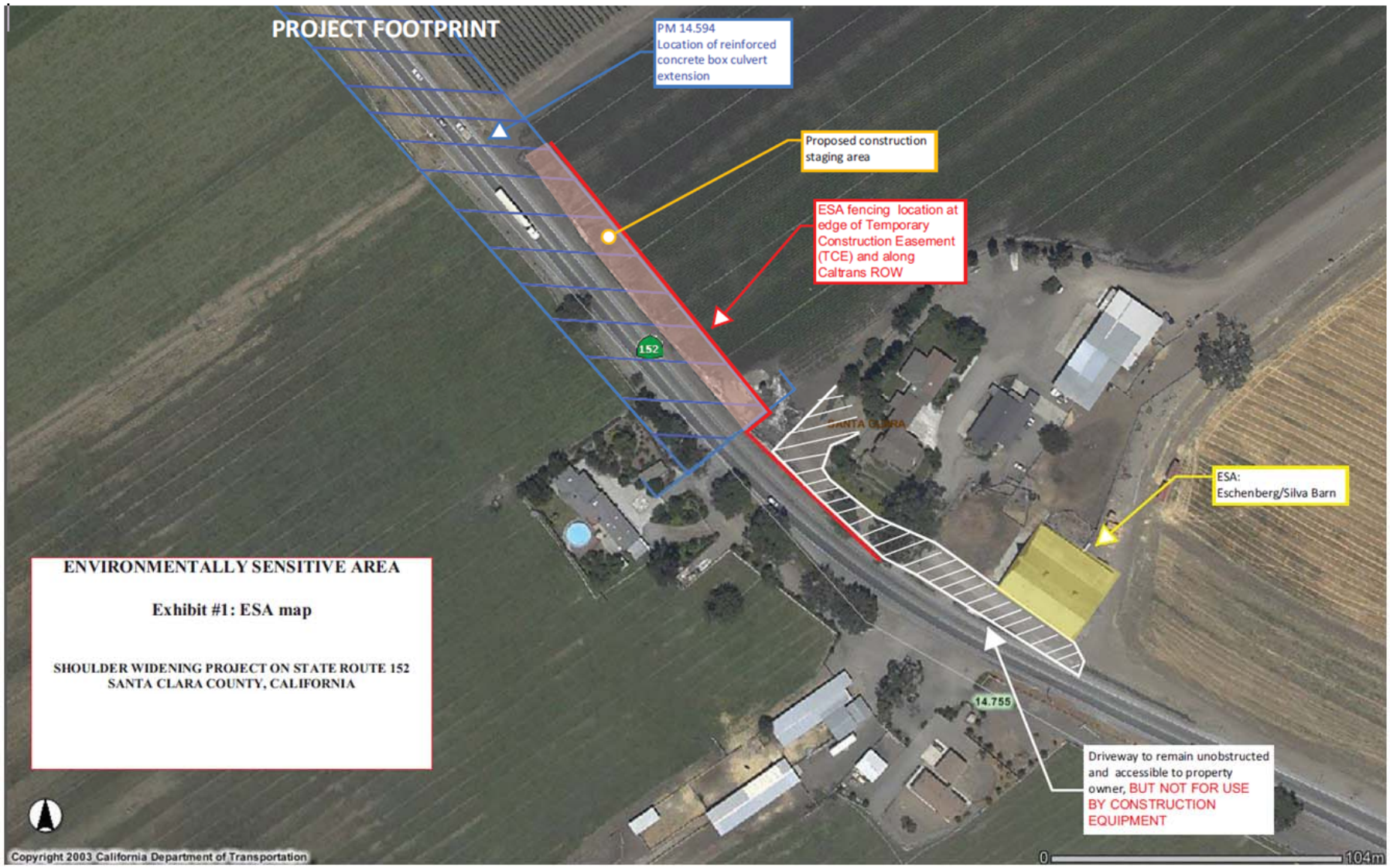


Figure 2.1-6: Environmental Sensitive Area (ESA) Action Plan

2.2 Physical Environment

2.2.1 Water Quality and Storm Water Runoff

2.2.1.1 Regulatory Setting

Federal Requirements: Clean Water Act

In 1972, Congress amended the Federal Water Pollution Control Act, making the addition of pollutants to the waters of the United States (U.S.) from any point source[1] unlawful unless the discharge is in compliance with a National Pollutant Discharge Elimination System (NPDES) permit. This act and its amendments are known today as the Clean Water Act (CWA). Congress has amended the act several times. In the 1987 amendments, Congress directed dischargers of storm water from municipal and industrial/construction point sources to comply with the NPDES permit scheme. The following are important CWA sections:

- Sections 303 and 304 require states to issue water quality standards, criteria, and guidelines.
- Section 401 requires an applicant for a federal license or permit to conduct any activity that may result in a discharge to waters of the U.S. to obtain certification from the state that the discharge will comply with other provisions of the act. This is most frequently required in tandem with a Section 404 permit request (see below).
- Section 402 establishes the NPDES, a permitting system for the discharges (except for dredge or fill material) of any pollutant into waters of the U.S. Regional Water Quality Control Boards (RWQCB) administer this permitting program in California. Section 402(p) requires permits for discharges of storm water from industrial/construction and municipal separate storm sewer systems (MS4s).
- Section 404 establishes a permit program for the discharge of dredge or fill material into waters of the United States. This permit program is administered by the U.S. Army Corps of Engineers (USACE).

The goal of the CWA is "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters."

The USACE issues two types of 404 permits: General and Standard permits. There are two types of General permits: Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental

[1] A point source is any discrete conveyance such as a pipe or a man-made ditch.

effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of the USACE's Standard permits. There are two types of Standard permits: Individual permits and Letters of Permission. For Standard permits, the USACE decision to approve is based on compliance with U.S. Environmental Protection Agency's Section 404 (b)(1) Guidelines (U.S. EPA Code of Federal Regulations [CFR] 40 Part 230), and whether the permit approval is in the public interest. The Section 404(b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S. and not have any other significant adverse environmental consequences. According to the Guidelines, documentation is needed that a sequence of avoidance, minimization, and compensation measures has been followed, in that order. The Guidelines also restrict permitting activities that violate water quality or toxic effluent[2] standards, jeopardize the continued existence of listed species, violate marine sanctuary protections, or cause "significant degradation" to waters of the U.S. In addition, every permit from the USACE, even if not subject to the Section 404(b)(1) Guidelines, must meet general requirements. See 33 CFR 320.4. A discussion of the LEDPA determination, if any, for the document is included in the Wetlands and Other Waters section.

State Requirements: Porter-Cologne Water Quality Control Act

California's Porter-Cologne Act, enacted in 1969, provides the legal basis for water quality regulation within California. This act requires a "Report of Waste Discharge" for any discharge of waste (liquid, solid, or gaseous) to land or surface waters that may impair beneficial uses for surface and/or groundwater of the state. It predates the CWA and regulates discharges to waters of the state. Waters of the state include more than just waters of the U.S., like groundwater and surface waters not considered waters of the U.S. Additionally, it prohibits discharges of "waste" as defined, and this definition is broader than the CWA definition of "pollutant." Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA.

The State Water Resources Control Board (SWRCB) and RWQCBs are responsible for establishing the water quality standards (objectives and beneficial uses) required by the CWA

[2] The U.S. EPA defines "effluent" as "wastewater, treated or untreated, that flows out of a treatment plant, sewer, or industrial outfall."

and regulating discharges to ensure compliance with the water quality standards. Details about water quality standards in a project area are included in the applicable RWQCB Basin Plan. In California, Regional Boards designate beneficial uses for all water body segments in their jurisdictions and then set criteria necessary to protect these uses. As a result, the water quality standards developed for particular water segments are based on the designated use and vary depending on that use. In addition, the SWRCB identifies waters failing to meet standards for specific pollutants. These waters are then state-listed in accordance with CWA Section 303(d). If a state determines that waters are impaired for one or more constituents and the standards cannot be met through point source or non-point source controls (NPDES permits or WDRs), the CWA requires the establishment of Total Maximum Daily Loads (TMDLs). TMDLs specify allowable pollutant loads from all sources (point, non-point, and natural) for a given watershed.

State Water Resources Control Board and Regional Water Quality Control Boards

The SWRCB administers water rights, sets water pollution control policy, and issues water board orders on matters of statewide application, and oversees water quality functions throughout the state by approving Basin Plans, TMDLs, and NPDES permits. RWCQBs are responsible for protecting beneficial uses of water resources within their regional jurisdiction using planning, permitting, and enforcement authorities to meet this responsibility.

National Pollutant Discharge Elimination System (NPDES) Program

Municipal Separate Storm Sewer Systems (MS4)

Section 402(p) of the CWA requires the issuance of NPDES permits for five categories of storm water discharges, including Municipal Separate Storm Sewer Systems (MS4s). An MS4 is defined as "any conveyance or system of conveyances (roads with drainage systems, municipal streets, catch basins, curbs, gutters, ditches, human-made channels, and storm drains) owned or operated by a state, city, town, county, or other public body having jurisdiction over storm water, that is designed or used for collecting or conveying storm water." The SWRCB has identified the Department as an owner/operator of an MS4 under federal regulations. The Department's MS4 permit covers all Department rights-of-way, properties, facilities, and activities in the state. The SWRCB or the RWQCB issues NPDES permits for five years, and permit requirements remain active until a new permit has been adopted.

The Department's MS4 Permit (Order No. 2012-0011-DWQ) was adopted on September 19, 2012 and became effective on July 1, 2013. The permit has three basic requirements:

1. The Department must comply with the requirements of the Construction General Permit (see below);

2. The Department must implement a year-round program in all parts of the State to effectively control storm water and non-storm water discharges; and

3. The Department storm water discharges must meet water quality standards through implementation of permanent and temporary (construction) Best Management Practices (BMPs), to the Maximum Extent Practicable, and other measures as the SWRCB determines to be necessary to meet the water quality standards.

To comply with the permit, the Department developed the Statewide Storm Water Management Plan (SWMP) to address storm water pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The SWMP assigns responsibilities within the Department for implementing storm water management procedures and practices as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The SWMP describes the minimum procedures and practices the Department uses to reduce pollutants in storm water and non-storm water discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of Best Management Practices (BMPs). The proposed project will be programmed to follow the guidelines and procedures outlined in the latest SWMP to address storm water runoff.

Construction General Permit

Construction General Permit (Order No. 2009-009-DWQ), adopted on September 2, 2009, became effective on July 1, 2010. The permit regulates storm water discharges from construction sites that result in a Disturbed Soil Area (DSA) of one acre or greater, and/or are smaller sites that are part of a larger common plan of development. By law, all storm water discharges associated with construction activity where clearing, grading, and excavation result in soil disturbance of at least one acre must comply with the provisions of the General Construction Permit. Construction activity that results in soil disturbances of less than one acre is subject to this Construction General Permit if there is potential for significant water quality impairment resulting from the activity as determined by the RWQCB. Operators of regulated construction sites are required to develop storm water pollution prevention plans; to implement sediment, erosion, and pollution prevention control measures; and to obtain coverage under the Construction General Permit.

The 2009 Construction General Permit separates projects into Risk Levels 1, 2, or 3. Risk levels are determined during the planning and design phases, and are based on potential erosion and transport to receiving waters. Requirements apply according to the Risk Level determined. For example, a Risk Level 3 (highest risk) project would require compulsory storm water runoff pH and turbidity monitoring, and before construction and after construction aquatic biological

assessments during specified seasonal windows. For all projects subject to the permit, applicants are required to develop and implement an effective Storm Water Pollution Prevention Plan (SWPPP). In accordance with the Department's Standard Specifications, a Water Pollution Control Plan (WPCP) is necessary for projects with DSA less than one acre.

Section 401 Permitting

Under Section 401 of the CWA, any project requiring a federal license or permit that may result in a discharge to a water of the United States must obtain a 401 Certification, which certifies that the project will be in compliance with state water quality standards. The most common federal permits triggering 401 Certification are CWA Section 404 permits issued by the USACE. The 401 permit certifications are obtained from the appropriate RWQCB, dependent on the project location, and are required before the USACE issues a 404 permit.

In some cases, the RWQCB may have specific concerns with discharges associated with a project. As a result, the RWQCB may issue a set of requirements known as Waste Discharge Requirements (WDRs) under the State Water Code (Porter-Cologne Act) that define activities, such as the inclusion of specific features, effluent limitations, monitoring, and plan submittals that are to be implemented for protecting or benefiting water quality. WDRs can be issued to address both permanent and temporary discharges of a project.

2.2.1.2 Affected Environment

A Water Quality Study was completed on June 5, 2014.

The project is within the Pajaro River Hydrologic Unit, South Santa Clara Valley Hydrologic Area, and Guerneville Hydrologic Sub-Area. The project is within the Pajaro River watershed and Upper Pajaro River sub-watershed.

Storm water runoff from the project area drains to the existing drainage ditch on the westbound shoulder of SR 152. It eventually discharges to Furlong (Jones) Creek about 0.57 miles southwest of the project area. Furlong Creek is listed in the 2010 TMDLs and Section 303(d) as an impaired water body. The pollutants of concern are chlorpyrifos, Escherichia coli, Fecal Coliform, Nitrate, and Turbidity. The ultimate receiving water bodies are Llagas Creek and Pajaro River.

The project area is located in the Hollister Area groundwater sub-basin 3-3.03 in the Central Coast Hydrologic Region (WQ study 2014). Storm water in the northern portion of the project area drains toward Monterey Bay via the Pajaro River and its tributaries. The groundwater level is expected to be deeper than 6.5 feet below the natural ground level (WQ Study 2014).

2.2.1.3 Environmental Consequences

It is anticipated that the project will have more than one acre of Disturbed Soil Area (DSA), less than one acre of combined new added impervious and reworked impervious area. The project will have temporary impacts occurring during construction activities. Waters of the U.S. are not present within the project footprint, and therefore will not be impacted.

Since the project will add less than one acre of impervious area, it is not susceptible to hydro-modification impacts.

The no build alternative would not make improvements to SR 152 and therefore would not impact water quality.

2.2.1.4 Avoidance, Minimization, and/or Mitigation Measures

1. A Construction General Permit (CGP) and the Department's National Pollutant Discharge Elimination System (NPDES) permit will be issued to avoid and/or minimize the project's temporary impacts from construction activities. Best Management Practices (BMPs) will be incorporated to reduce the discharge of pollutants during construction to the Maximum Extent Practicable (MEP).

2. Construction Site BMPs will be implemented to reduce the pollutants from storm water discharge. Construction Site BMPs include, but are not limited to soil stabilization, sediment control, tracking controls, wind erosion control, waste management and materials pollution control, and job site management.

3. Given that the anticipated soil disturbance is more than one acre, a Stormwater Pollution Prevention Plan (SWPPP) will be developed during construction. This document addresses the deployment of various erosion and water pollution control measures that are required commensurate to changing construction activities. The exact locations for the BMPs will be determined during the design phase.

2.2.2 Hazardous Waste/Materials

2.2.2.1 Regulatory Setting

Hazardous materials, including hazardous substances and wastes, are regulated by many state and federal laws. Statutes govern the generation, treatment, storage and disposal of hazardous materials, substances, and waste, and also the investigation and mitigation of waste releases, air and water quality, human health and land use.

The primary federal laws regulating hazardous wastes/materials are the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) and the Resource Conservation and Recovery Act of 1976 (RCRA). The purpose of CERCLA, often referred to as "Superfund," is to identify and clean up abandoned contaminated sites so that public health and welfare are not compromised. The RCRA provides for "cradle to grave" regulation of hazardous waste generated by operating entities. Other federal laws include:

- Community Environmental Response Facilitation Act (CERFA) of 1992
- Clean Water Act
- Clean Air Act
- Safe Drinking Water Act
- Occupational Safety and Health Act (OSHA)
- Atomic Energy Act
- Toxic Substances Control Act (TSCA)
- Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)

In addition to the acts listed above, Executive Order (EO) 12088, *Federal Compliance with Pollution Control Standards*, mandates that necessary actions be taken to prevent and control environmental pollution when federal activities or federal facilities are involved.

California regulates hazardous materials, waste, and substances under the authority of the CA Health and Safety Code and is also authorized by the federal government to implement RCRA in the state. California law also addresses specific handling, storage, transportation, disposal, treatment, reduction, cleanup and emergency planning of hazardous waste. The Porter-Cologne Water Quality Control Act also restricts disposal of wastes and requires clean up of wastes that are below hazardous waste concentrations but could impact ground and surface water quality. California regulations that address waste management and prevention and clean up contamination include Title 22 Division 4.5 Environmental Health Standards for the Management of Hazardous Waste, Title 23 Waters, and Title 27 Environmental Protection.

Worker and public health and safety are key issues when addressing hazardous materials that may affect human health and the environment. Proper management and disposal of hazardous material is vital if it is found, disturbed, or generated during project construction.

2.2.2.2 Affected Environment

Initial Site Assessments (ISA) conducted in previous projects have found Aerial Deposited Lead (ADL), hydrocarbons, and other potential contaminants within the project's study limits.

2.2.2.3 Environmental Consequences

The Office of Environmental Engineering will conduct soil testing during the Design phase in areas where excavation occurs to test the concentration of contaminants, and the level and extent of contamination in relationship to the project.

The no build alternative would not make improvements to the project and therefore would not conduct soil testing in the project area.

2.2.2.4 Avoidance, Minimization, and/or Mitigation Measures

1. Contaminated soil will either be re-used within the project limits if allowed or disposed of at a permitted landfill.

2.3 Biological Environment

2.3.1 Natural Communities

This section of the document discusses natural communities of concern. The focus of this section is on biological communities, not individual plant or animal species. This section also includes information on wildlife corridors and habitat fragmentation. Wildlife corridors are areas of habitat used by wildlife for seasonal or daily migration. Habitat fragmentation involves the potential for dividing sensitive habitat and thereby lessening its biological value.

Habitat areas that have been designated as critical habitat under the Federal Endangered Species Act are discussed below in the Threatened and Endangered Species Section 2.3.4. Wetlands and other waters are also discussed below in Section 2.3.2.

2.3.1.1 Affected Environment

A Natural Environmental Study (NES) was completed on July 14, 2014. Within the Biological Study Area (BSA) (Figures 2.3-1, 2.3-2, 2.3-3), there are four land cover types: Mediterranean California naturalized annual and perennial grassland, ruderal-agricultural, remnant mixed oak woodland/California walnut groves, and riparian.

Mediterranean California Naturalized Annual and Perennial Grassland

Approximately 3.5 acres of Mediterranean California naturalized annual and perennial grassland occur within the BSA. This vegetation community makes up most of the BSA on the north side of SR 152 and is dominated by wild oats (*Avena fatua*), ripgut brome (*Bromus diandrus*), Italian wildrye (*Lolium multiflorum*), wall barley (*Hordeum murinum*), and exotic filarees (*Erodium cicutarium*, *E. moschatum*). Along the road are black mustard (*Brassica nigra*), fennel (*Foeniculum vulgare*), poison hemlock, milk thistle (*Silybum marianum*), Harding grass (*Phalaris aquatica*), California sagebrush, and mugwort.

Redural-agricultural

Ruderal-agricultural vegetation occupies approximately 2.2 acres of land within the BSA. This vegetation type is confined to agricultural fields consisting mainly of grape vineyards and alfalfa (*Medicago sativa*). These areas are heavily disturbed by agricultural operations.

Remnant Mixed Oak Woodland/California Walnut Groves

Approximately 0.42 acre of remnant mixed oak woodland/California walnut groves occurs within the BSA. Three very small scattered patches can be found on the south side of SR 152 and are dominated by Coast live oak (*Quercus agrifolia*), valley oak (*Q. lobata*), and California black walnut (*Juglans californica*).

Riparian

A small patch of riparian vegetation occurs at the west end of the BSA (0.1 acre), at San Ysidro Creek. Arroyo willow (*Salix lasiolepis*), red willow, and California black walnut are the dominant species in the riparian habitat. This area is outside the proposed project footprint but is within the 250-foot buffer at the end of the project alignment, and is thus considered part of the BSA. Other major water features with riparian habitat occur throughout the project vicinity and make up the Pajaro River watershed. They include Llagas Creek, San Felipe Lake, Alamias Creek, Dexter Creek, Miller Slough, and the Pajaro River. These riparian areas are entirely outside of the BSA.

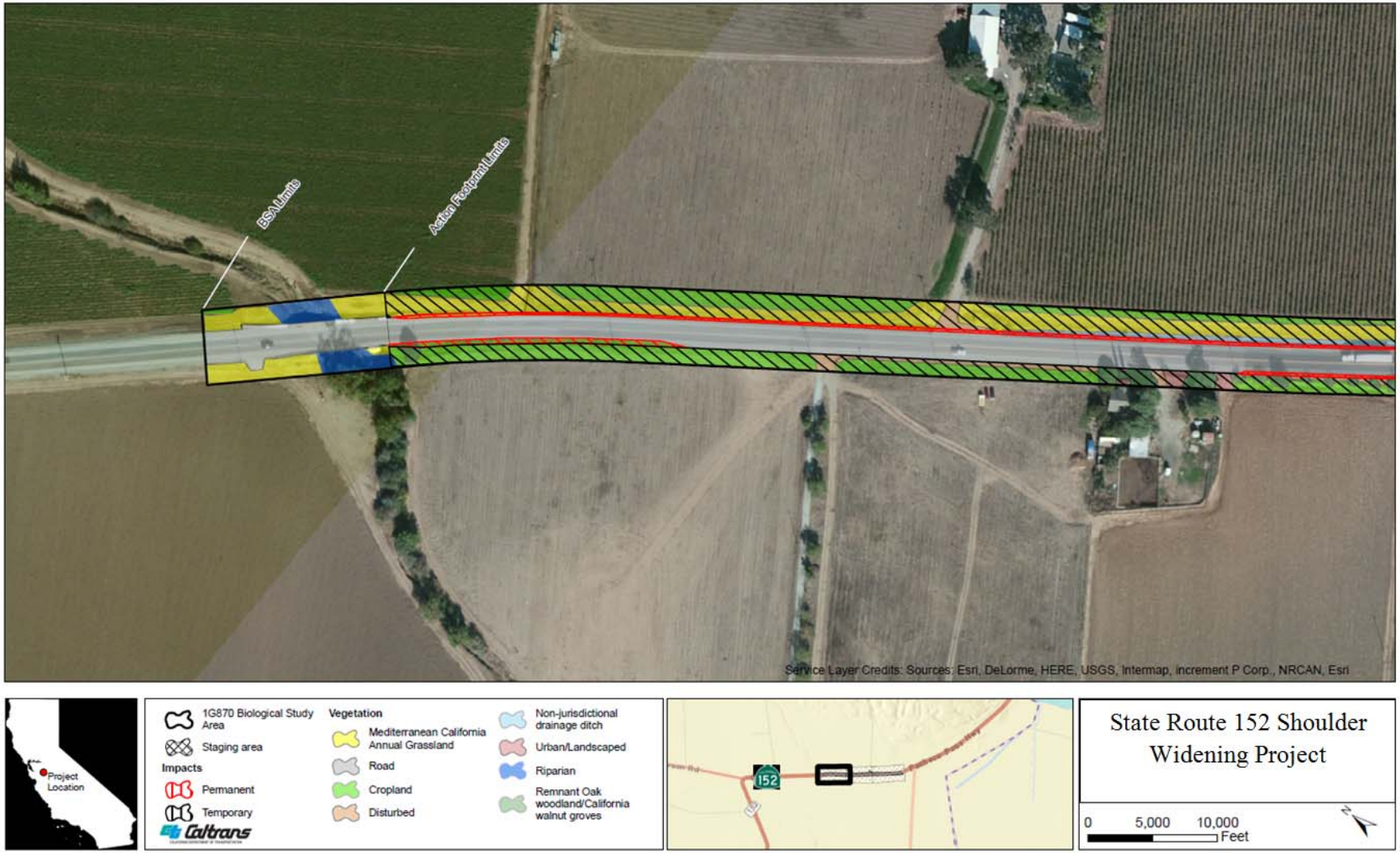


Figure 2.3-1: Biological Study Area and Footprint Map – Detail 1

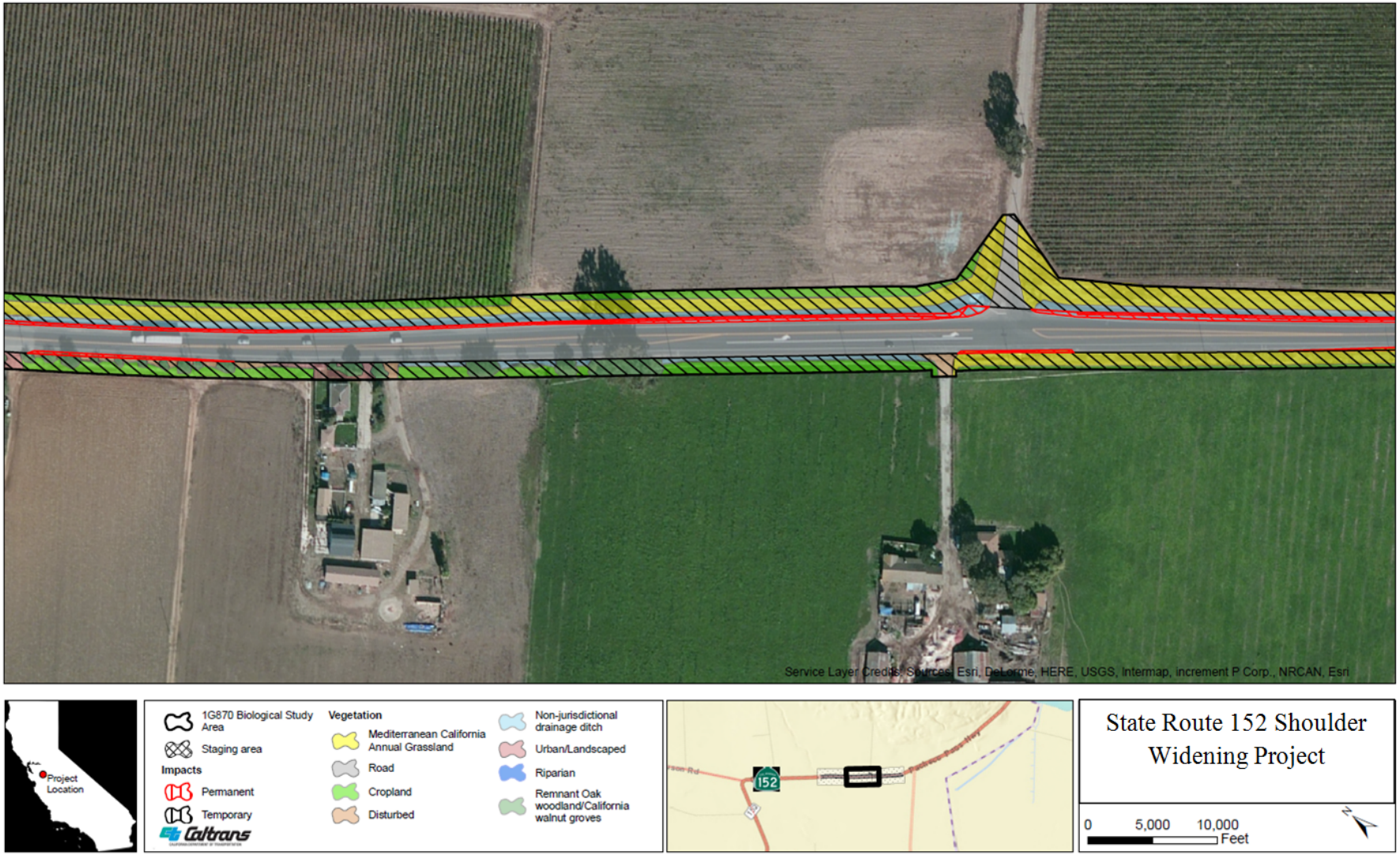


Figure 2.3-2: Biological Study Area and Footprint Map – Detail 2

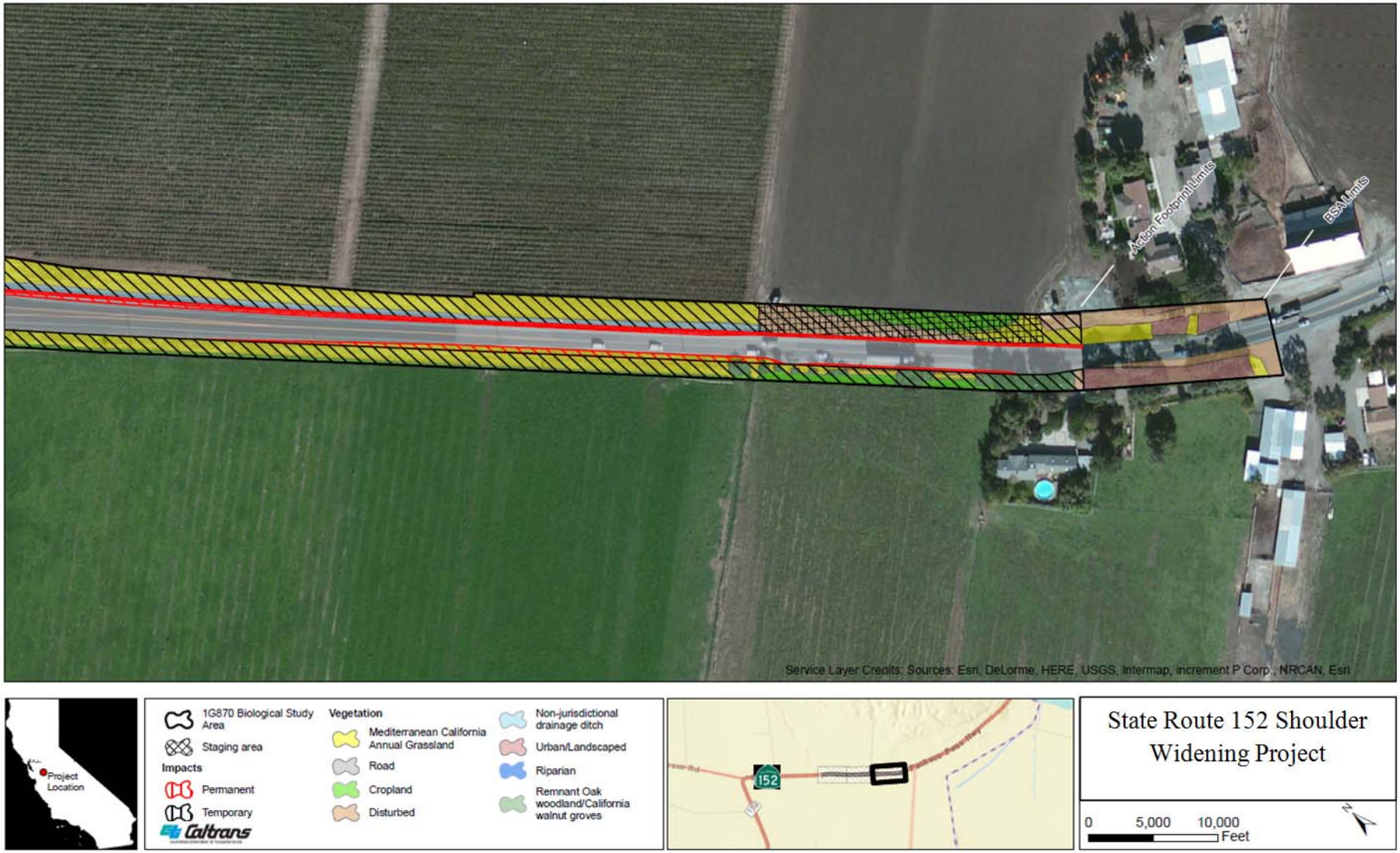


Figure 2.3-3: Biological Study Area and Footprint Map – Detail 3

2.3.1.2 Environmental Consequences

Table 2.3-1 lists the potential temporary and permanent effects on habitats from roadway construction. Temporary effects on habitat are those that can be restored and revegetated after completion of construction to pre-construction conditions. Permanent effects on habitat include those areas that will be lost because of changes such as increased paved surface, which will remain after construction is completed.

Land Cover Type	Total Within BSA (acres)	Project Footprint		Total Effects (acres)
		Permanent Effects (acres)	Temporary Effects (acres)	
Mediterranean California naturalized annual and perennial grassland	3.5	0	3.71	3.71
Ruderal-agricultural	2.2	0.06	1.37	1.43
Remnant mixed oak woodland/California walnut groves	0.4	0.02	0.40	0.42
Riparian	0.1	0	0	0.00
Total	**6.2**	**0.08**	**5.48**	**5.56**

Table 2.3-1: Potential Effects on Habitats

The no build alternative would not make any improvements to SR 152 and therefore would not impact natural communities.

2.3.1.3 Avoidance, Minimization, and/or Mitigation Measures

1. Immediately prior to any construction activities, a USFWS-approved biological monitor will conduct preconstruction surveys within and adjacent to the BSA and in any adjacent environmentally sensitive areas. The biological monitor will survey suitable aquatic and upland habitats and locations subject to disturbance. The biological monitor also will inspect any open holes, pipes, and equipment in designated staging areas. Daily clearance surveys will occur before initial ground disturbing activities occur in an environmentally sensitive area. No clearing and grubbing will be permitted beyond paved surfaces until the area has been surveyed and cleared by the approved biological monitor.

2. Before beginning construction, a USFWS-approved biologist will conduct a mandatory employee training session that will include the biology and ecology of sensitive species and habitats with the potential to occur in or near the BSA. The training will be provided to all construction workers before they begin any work at the construction site.

3. All slopes or unpaved areas affected by the proposed action will be restored to natural conditions. Where disturbance includes the removal of trees or plants, native species will be replanted and maintained until they become established.

2.3.2 Wetlands and Other Waters

2.3.2.1 Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 1344), is the primary law regulating wetlands and surface waters. One purpose of the CWA is to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Waters of the U.S. include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce. To classify wetlands for the purposes of the CWA, a three-parameter approach is used that includes the presence of hydrophytic (water-loving) vegetation, wetland hydrology, and hydric soils (soils formed during saturation/inundation). All three parameters must be present, under normal circumstances, for an area to be designated as a jurisdictional wetland under the CWA.

Section 404 of the CWA establishes a regulatory program that provides that discharge of dredged or fill material cannot be permitted if a practicable alternative exists that is less damaging to the aquatic environment or if the nation's waters would be significantly degraded. The Section 404 permit program is run by the U.S. Army Corps of Engineers (USACE) with oversight by the United States Environmental Protection Agency (U.S. EPA).

The USACE issues two types of 404 permits: General and Standard permits. There are two types of General permits: Regional permits and Nationwide permits. Regional permits are issued for a general category of activities when they are similar in nature and cause minimal environmental effect. Nationwide permits are issued to allow a variety of minor project activities with no more than minimal effects.

Ordinarily, projects that do not meet the criteria for a Nationwide Permit may be permitted under one of USACE's Standard permits. There are two types of Standard permits: Individual permits and Letters of Permission. For Standard permits, the USACE decision to approve is based on compliance with U.S. EPA's Section 404(b)(1) Guidelines (U.S. EPA 40 Code of Federal Regulations [CFR] Part 230), and whether permit approval is in the public interest. The Section 404 (b)(1) Guidelines (Guidelines) were developed by the U.S. EPA in conjunction with the USACE, and allow the discharge of dredged or fill material into the aquatic system (waters of the U.S.) only if there is no practicable alternative which would have less adverse effects. The Guidelines state that the USACE may not issue a permit if there is a least environmentally damaging practicable alternative (LEDPA) to the proposed discharge that would have lesser effects on waters of the U.S., and not have any other significant adverse environmental consequences.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, this EO states that a federal agency, such as the FHWA and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: 1) that there is no practicable alternative to the construction and 2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board (SWRCB), the Regional Water Quality Control Boards (RWQCB) and the California Department of Fish and Wildlife (CDFW). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs) and may be required even when the discharge is already permitted or exempt under the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for activities which may result in a discharge to waters of the U.S. This is most frequently required in tandem with a Section 404 permit request. Please see the Water Quality section for additional details.

2.3.2.2 Affected Environment

The BSA is within the Pajaro River Watershed, which drains portions of the Diablo and Gabilan Ranges. The main hydrological feature in the BSA is the San Ysidro Creek. The creek is a seasonal drainage that passes under SR 152 and becomes a channelized agricultural drainage ditch that flows into Llagas Creek.

A wetland delineation was conducted on February 25, 2014, by Department biologists Robert Vogt and Rosalie Wilson to determine the presence of potential wetlands and other waters of the United States within the BSA. Before field surveys were conducted, reference materials were reviewed, including aerial photographs of the project area and vicinity, and standard biological references and field guides.

2.3.2.3 Environmental Consequences

The wetland delineation determined that there are no potential wetlands or other waters of the United States within the project area. The San Ysidro creek was delineated as "other waters" and is located within the BSA, but is located outside the proposed project footprint (Figures 2.3-1, 2.3-2, and 2.3-3). Further, this creek does not have a hydraulic connection to any drainage within the BSA. Therefore, there are no waters of the U.S. that will be impacted.

The no build alternative would not make improvements to SR 152 and therefore would not impact wetlands and other waters.

2.3.2.4 Avoidance, Minimization, and/or Mitigation Measures

1. In compliance with the requirements of the Central Coast Regional Water Quality Control Board, a storm water pollution prevention plan (SWPPP) and erosion control BMPs will be developed and implemented to minimize any wind- or water-related material discharges. The SWPPP will provide guidance for design staff, to include provisions in construction contracts for measures to protect environmentally sensitive areas and to prevent and minimize storm water and non-storm water discharges.

2.3.3 Animal Species

2.3.3.1 Regulatory Setting

Many state and federal laws regulate impacts to wildlife. The U.S. Fish and Wildlife Service (USFWS), the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) and the California Department of Fish and Wildlife (CDFW) are responsible for implementing these laws. This section discusses potential impacts and permit requirements associated with animals not listed or proposed for listing under the federal or state Endangered Species Act. Species listed or proposed for listing as threatened or endangered are discussed in Section 2.3.5 below. All other special-status animal species are discussed here, including CDFW fully protected species and species of special concern, and USFWS or NOAA Fisheries Service candidate species.

Federal laws and regulations relevant to wildlife include the following:

- National Environmental Policy Act
- Migratory Bird Treaty Act
- Fish and Wildlife Coordination Act

State laws and regulations relevant to wildlife include the following:

- California Environmental Quality Act
- Sections 1600 – 1603 of the California Fish and Game Code
- Sections 4150 and 4152 of the California Fish and Game Code

2.3.3.2 Affected Environment

Department biologists conducted a reconnaissance-level habitat assessment on April 29, 2014, to assess existing conditions, biological resources, and special-status terrestrial wildlife potentially present within the BSA.

The habitats adjacent to the BSA provide habitat for mammals, birds, reptiles, and amphibians. The most common wildlife associated with the nearby habitats include black-tailed deer (*Odocoilus hemionus*), California ground squirrel (*Spermophilus beecheyi),* pocket gopher *(Thomomys bottae)*, mourning dove (*Zenaida macroura*), chestnut-backed chickadee (*Poecile rufescens*), Western scrub-jay (*Aphelocoma coerulescens*), red-tailed hawk (*Buteo jamaicensis*), Western fence lizard (*Sceloporus occidentalis*), and Pacific treefrog (*Pseudacris regilla*).

A review of the California Natural Diversity Database (CNDDB) revealed a single historical occurrence of the Pallid bat located within five miles of the proposed project footprint. This historical observation was in 1938, and no detailed description of the location is available. Preferred roosting sites (e.g., caves, bridges, and old, decaying trees) are generally absent from the project vicinity. However, decaying trees and large trees within and near the BSA may provide marginally suitable roosting habitat. If the species is present, it most likely uses the areas within and around the BSA for foraging or temporary occupancy.

A review of the CNDDB found five Burrowing Owl (BUOW) occurrences reported within five miles of the BSA and no recorded occurrence within 1.5 miles. No protocol-level surveys for BUOW have been conducted in the proposed project footprint and no signs of BUOW use—such as pellets, whitewash, or feathers—were observed during reconnaissance field surveys. The Mediterranean California naturalized annual and perennial grassland surrounding and within the BSA could potentially provide marginally suitable sheltering and breeding habitat for this species.

2.3.3.3 Environmental Consequences

SR 152 itself may present a partial barrier to wildlife movement. Because the BSA is limited to a narrow, low-quality habitat area bordering the existing highway, wildlife species likely do not

reside within it. Instead wildlife uses the BSA during dispersal between each side of the highway. The majority of the BSA has been previously disturbed and lacks natural vegetation.

Construction of the proposed project has the potential to temporarily disrupt roosting or foraging activities of the Pallid bat. These effects would occur during nighttime foraging periods when adult bats leave the roost to feed.

If BUOW is found within the BSA, the proposed project has the potential to temporarily disrupt BUOW breeding and foraging activities during construction. However, nighttime project work will not overlap with the active time of day of the species. Avoidance and minimization measures will be implemented to avoid effects to BUOW.

The no build alternative would not make improvements to SR 152 and therefore would not impact animal species.

2.3.3.4 Avoidance, Minimization, and/or Mitigation Measures

1. Before beginning construction, a Department approved biologist will conduct an employee training session to all construction workers that will include the biology and ecology of sensitive species and habitats with the potential to occur in or near the BSA.
2. The nesting season for migratory birds is anticipated to occur between February 1 and August 31. If occupied nests—nests with birds or eggs—are observed to be present within or adjacent to the BSA during vegetation clearing and grubbing, the approved biological monitor will notify the Resident Engineer to stop work and notify the Department biologist. No work buffers would be established (within 100 feet of a passerine nest or within 300 feet of a raptor nest) and USFWS and CDFW will be notified.
3. A biologist will conduct pre-construction surveys for pallid bat in the project vicinity. If any maternity roosts of special-status bats are discovered in the project vicinity, these areas will be identified as environmentally sensitive areas and appropriate buffers and work windows will be applied during project construction.
4. For BUOW, pre-construction surveys will be completed if construction activities occur during the breeding season (February 1 through August 1). No disturbance will occur within approximately 164 feet (50 meters) of occupied BUOW burrows during non-breeding periods (October 16 through March 31), or within approximately 656 feet (200 meters) during the breeding/fledging period (April 1 through October 15). If construction activities are intended to occur within these limits while burrows are active, a site-specific work plan will be prepared and construction will only be allowed to take place if a biological monitor is present.

2.3.4 Threatened and Endangered Species

2.3.4.1 Regulatory Setting

The primary federal law protecting threatened and endangered species is the Federal Endangered Species Act (FESA): 16 United States Code (USC) Section 1531, et seq. See also 50 Code of Federal Regulations (CFR) Part 402. This act and later amendments provide for the conservation of endangered and threatened species and the ecosystems upon which they depend. Under Section 7 of this act, federal agencies, such as the Federal Highway Administration (FHWA), are required to consult with the U.S. Fish and Wildlife Service (USFWS) and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroy or adversely modify designated critical habitat. Critical habitat is defined as geographic locations critical to the existence of a threatened or endangered species. The outcome of consultation under Section 7 may include a Biological Opinion with an Incidental Take statement, a Letter of Concurrence and/or documentation of a No Effect finding. Section 3 of FESA defines take as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect or any attempt at such conduct."

California has enacted a similar law at the state level, the California Endangered Species Act (CESA), California Fish and Game Code Section 2050, et seq. CESA emphasizes early consultation to avoid potential impacts to rare, endangered, and threatened species and to develop appropriate planning to offset project-caused losses of listed species populations and their essential habitats. The California Department of Fish and Wildlife (CDFW) is the agency responsible for implementing CESA. Section 2081 of the Fish and Game Code prohibits "take" of any species determined to be an endangered species or a threatened species. Take is defined in Section 86 of the Fish and Game Code as "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill." CESA allows for take incidental to otherwise lawful development projects; for these actions an incidental take permit is issued by the CDFW. For species listed under both the FESA and CESA requiring a Biological Opinion under Section 7 of the FESA, the CDFW may also authorize impacts to CESA species by issuing a Consistency Determination under Section 2080.1 of the California Fish and Game Code.

Another federal law, the Magnuson-Stevens Fishery Conservation and Management Act of 1976, was established to conserve and manage fishery resources found off the coast, as well as anadromous species and Continental Shelf fishery resources of the United States, by exercising (A) sovereign rights for the purposes of exploring, exploiting, conserving, and managing all fish within the exclusive economic zone established by Presidential Proclamation 5030, dated March 10, 1983, and (B) exclusive fishery management authority beyond the exclusive economic zone

over such anadromous species, Continental Shelf fishery resources, and fishery resources in special areas.

2.3.4.2 Affected Environment

On February 6, 2014, the Department's biologist conducted a field visit with Jerry Roe of USFWS at the project site. USFWS was provided with project plans, a description of the proposed build alternative, and a map of CNDDB occurrences within the project area. The Department initiated Section 7 formal consultation with the USFWS on July 1, 2014 by submitting a Biological Assessment (BA). The BA addressed the potential project effects on the California red-legged frog and the California tiger salamander. An updated USFWS species list was obtained on July 10, 2014 and on January 21, 2015. The Department received a Biological Opinion (Appendix I) from the USFWS on June 18, 2015 and section 2.3.4 has been updated accordingly.

California Tiger Salamander

No California tiger salamander (CTS) were observed during the field surveys related to the development of the NES. A review of the CNDDB revealed that a total of two adult and larval (breeding) CTS occurrences have been reported within 1.25 miles of the BSA, and that 11 additional occurrences have been reported within five miles.

San Ysidro creek does not remain sufficiently ponded throughout the year to support breeding populations of CTS. The riparian habitat near the creek lacks small mammal burrows, is likely a predator feeding area, and is patrolled heavily by land-based predators, such as skunks and raccoons. Therefore, the riparian area does not provide suitable upland or dispersal habitat for CTS.

Agricultural fields on the north side of SR 152 may provide dispersal habitat for CTS traveling between aquatic features and upland sites in the project vicinity. Burrowing activity in this area is limited by small mammal control and heavy agricultural disturbance. Grasslands adjacent to the vineyards on the north side of SR 152 contain some small mammal burrows. However, they are not likely to be active because of small mammal control, and therefore are not likely to be suitable habitat for CTS. The soil on top of the culvert along the south side of SR 152 currently does not contain suitable habitat that would support CTS. Grasslands on the south side of SR 152 may contain gopher burrows that could be used by CTS, but based on the tall height of the grass in the pastureland, none were detected during surveys.

Suitable aquatic habitat occurs within 1.24 miles of the BSA in the project vicinity; however, because of the high traffic volume on SR 152, this species is not likely to successfully move through the BSA to get to ponds located on either side of the highway. Because of the heavy traffic loads on the roadway, lack of suitable burrowing habitat, small mammal control, and

presence of predators in the BSA, CTS are not expected to occur in this area outside the wet season (June 1 and October 15).

California Red-Legged Frog

No CRLF were observed during the field surveys. Because of the poor quality and lack of suitable habitat in the BSA, no protocol-level surveys for CRLF were conducted. A review of the CNDDB indicates that nine CRLF occurrences have been reported within five miles of the BSA, and that the nearest occurrence was reported approximately 3.2 miles from the BSA.

Mediterranean California naturalized annual and perennial grasslands may provide dispersal and refugia habitat for CRLF. Grasslands adjacent to the vineyards on the north side of SR 152, next to Prunedale Road, contain some small mammal burrows that could provide refuge for migrating CRLF. However, these burrows are likely inactive because of small mammal control and heavy agricultural activity. Grasslands on the south side of SR 152 may provide habitat for pocket gophers, but none were detected, based on the tall height of the grass in the pastureland. The riparian area of San Ysidro Creek may provide suitable aquatic and upland habitat during the wet season, but because of its temporary nature, the riparian habitat in and near San Ysidro Creek does not provide suitable aquatic breeding or aquatic nonbreeding habitat for CRLF.

Suitable aquatic habitat occurs within one mile of the BSA in the project vicinity and CRLF potentially disperse through the BSA during wet weather months or seek refuge in underground culverts within the BSA. However, because of the high traffic volume on SR 152, lack of suitable refuge habitat, small mammal control, and high presence of predators, this species is not likely to utilize habitats in the BSA. Additionally, CRLF are not expected to occur in the BSA outside the wet season (June 1 and October 15).

San Joaquin Kit Fox

The BSA is within the northern portion of the historic range of the San Joaquin Kit Fox (SJKF). No presumed existing populations are within southern Santa Clara County. No protocol-level surveys for SJKF have been conducted in the project vicinity, and no SJKF were observed during the field surveys related to the development of this document.

Two SJKF occurrences were reported within a 10-mile radius around the BSA. The first occurrence was road kill observed before 1972 and is located approximately 6.53 miles northeast of the BSA. The second occurrence was observed approximately nine miles east of the BSA, sometime between 1972 and 1975. Because of very few recent occurrences recorded within a 10-mile radius of the BSA, it is unlikely that SJKF currently make regular use of the project vicinity.

Least Bell's Vireo

The proposed project footprint is located on the northern edge of the historical range of Least Bell's Vireo (LBV). No protocol-level surveys for LBV have been conducted in the project vicinity, and no LBV were observed during field surveys. Two LBV occurrences are recorded in the CNDDB within five miles of the BSA.

An isolated patch of riparian habitat, in the BSA along San Ysidro Creek, provides very marginally suitable LBV breeding habitat. The riparian vegetation lacks a well-developed, multistory, structured canopy. In addition, the riparian corridor of San Ysidro Creek is very narrow, about 40 feet wide, and is bordered by agricultural fields to the south and California annual grassland to the north, neither of which provides suitable foraging habitat for this species.

2.3.4.3 Environmental Consequences

California Tiger Salamander

All existing culverts that may allow CTS to pass under SR 152 would be retained. No new effects on CTS passage across SR 152 are expected to occur with the future operation of the proposed project.

If CTS are present in the BSA during construction, take may occur in the form of capture, harm, harassment, injury, and mortality to adult CTS from habitat loss and degradation, construction-related disturbance, and capture and relocation. The Department will apply for a CDFW Incidental Take Permit in the design phase of the project.

The proposed project would result in the temporary disturbance of an estimated 3.71 acres of poor quality upland and dispersal habitat. Temporary effects would include disturbance from trampling during vegetation clearing and equipment access during construction. Therefore, the proposed project may affect, and is likely to adversely affect CTS.

California Red-Legged Frog

All of the existing culverts that may allow CRLF to pass under SR 152 would be retained. No new effects on CRLF passage across SR 152 are expected to occur with the future operation of the proposed project.

No major potential effects on CRLF are expected to occur as a result of the proposed project. Most habitat in the proposed project footprint is already disturbed. It is unlikely for CRLF to use these areas regularly, particularly the road, non-jurisdictional drainage ditch, cropland, and urban/landscaped communities.

Because of the localized nature of the proposed project to improve the existing roadway, the proposed project would not influence or affect the potential long-term viability of existing CLRF

populations and reestablishment of populations within the species' historic range. However, the proposed project footprint is located within CRLF dispersal distance of a number of drainages and ponds that could provide suitable aquatic habitat. If CRLF are present in the project vicinity during construction, take in the form of capture, harm, harassment, injury, and mortality to adult CRLF from habitat loss and degradation, construction-related disturbance, and capture and relocation may occur.

Construction activities would result in temporary effects on 3.71 acres of potential CRLF upland and dispersal habitat. Temporary effects would include disturbance from trampling during vegetation clearing and equipment access. Therefore, the proposed project may affect, and is likely to adversely affect CRLF.

San Jacquin Kit Fox

The proposed project would not substantially reduce the quality or availability of land within the BSA for dispersing SJKF. Based on the lack of historical records in the project vicinity, SJKF are unlikely to use the BSA. The proposed project would not alter the ability of SJKF to cross SR 152. All culverts and bridges that provide potential roadway undercrossings would be retained. Therefore, the proposed project may affect, but is not likely to adversely affect SJKF.

Least Bell's Vireo

The patch of riparian habitat that occurs in the BSA may provide marginally suitable habitat for LBV. However, no evidence exists that San Ysidro Creek was ever historically occupied by LBV. Despite recent occurrences north of the species' primary southern California range, this species is still extremely rare anywhere in central California. Therefore, the proposed project may affect, but is not likely to adversely affect LBV.

The proposed project will have no effects to the following threatened and endangered species:

Scientific Name	Common Name	Status	Determination
Plants			
Dudleya setchellii	Santa Clara dudleya	Endangered	No Effect
Streptanthus albidus ssp. albidus	Mecalf Canyon jewel flower	Endangered	No Effect
Invertebrates			
Euphydryas editha bayensis	Bay checkerspot butterfly	Threatened	No Effect
Fish			
Oncorhynchus mykiss	South central California steelhead distinct population segment (DPS)	Threatened	No Effect
Oncorhynchus mykiss	Central Valley steelhead DPS	Threatened	No Effect

Hypomesus transpacificus	Delta smelt	Threatened	No Effect
Oncorhynchus tshawytscha	Central Valley steelhead DPS	Threatened	No Effect
Oncorhynchus tshawytscha	Winter run chinook Salmon DPS	Threatened	No Effect
Birds			
Brachyramphus marmoratus	Marbled murrelet	Threatened	No Effect
Stermula antillarum (=Sterna,=albifrons) browni	California least tern	Endangered	No Effect

The no build alternative would not make improvements to SR 152 and therefore would not impact threatened and endangered species.

2.3.4.4 Avoidance, Minimization, and/or Mitigation Measures

1. All work for the proposed project will be scheduled to occur between June 1 and October 15, to avoid effects on species active during the wet weather months, when amphibian species are most active. This measure is required to reduce CEQA significant impacts to CTS and CRLF to less-than-significant.

2. Before beginning construction, a qualified biologist will conduct a mandatory employee training session to all construction personnel. The training will include the biology and ecology of sensitive species and habitats with the potential to occur in or near the BSA and the avoidance and minimization measures to be implemented to reduce impacts to these species.

3. Preconstruction surveys will be conducted by a Department approved biological monitor immediately before beginning any ground-disturbing activities and vegetation clearing that may result in take of CTS and/or CRLF. All suitable aquatic and upland habitats and mammal burrows will be thoroughly inspected for salamanders and/or frogs. The biological monitor will remain onsite during all activities that may result in take of CRLF and/or CTS. Daily biological monitoring for CTS during construction activities that may result in the take of CTS is required to reduce CEQA significant impacts to CTS and CRLF to less-than-significant.

4. To ensure that no LBV are in the project vicinity or nesting close enough to be disturbed by construction activities, preconstruction surveys for LBV will be conducted by an USFWS-approved biological monitor. The surveys will be no more than two weeks before construction begins, for construction activities intended to occur during the breeding season. If work is suspended for more than 15 days during the breeding season, surveys will be conducted again before construction resumes.

5. Before construction activities begin, the contractor will clearly delineate environmentally sensitive areas (ESAs) with Wildlife Exclusion Fencing (WEF) in accordance with permit requirements. The WEF will serve to exclude CTS and CRLF from construction areas and exclude construction personnel from ESAs. WEF will be installed along the perimeter of all ESAs, will remain in place throughout the duration of construction, and will be inspected regularly and fully maintained. Repairs to the WEF will be made within 24 hours of discovery. After construction is completed, the WEF will be completely removed. This measure is required to reduce CEQA significant impacts to CTS to less-than-significant.

6. To prevent inadvertent entrapment of CLRF, CTS, SJKF, and/or other animals during construction, all excavated holes or trenches more than one foot deep will be covered with plywood or similar materials at the end of each working day. The holes or trenches can also contain one or more escape ramps, constructed of earth fill or wooden planks. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. If trapped wildlife is discovered at any time, USFWS will be contacted within one working day by telephone and e-mail for guidance.

7. All construction pipes, culverts, or similar structures with a diameter of four inches or greater that are stored at a construction site for one or more overnight periods will be securely capped before storage. Additionally they will be thoroughly inspected for SJKF before being subsequently buried, capped, or otherwise used or moved in any way. Any SJKF found in a pipe or culvert will be allowed to escape unimpeded.

8. A 500-foot buffer will be established around the location of any LBV individual or any active nests within or near the proposed project footprint. The Department will not begin or continue construction activities until the individual leaves the area on its own or the birds have fledged from the nest.

9. Construction site management practices will be implemented to avoid or minimize effects on listed species and their habitats. These include: a speed limit of 15 miles per hour, designated construction staging and storage areas will be located outside ESA's, trash be disposed of off-site, a firearm restriction, and all equipment will be properly maintained and free of leaks.

2.3.5 Invasive Species

2.3.5.1 Regulatory Setting

On February 3, 1999, President William J. Clinton signed Executive Order (EO) 13112 requiring federal agencies to combat the introduction or spread of invasive species in the United States.

The order defines invasive species as “any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that ecosystem whose introduction does or is likely to cause economic or environmental harm or harm to human health." Federal Highway Administration (FHWA) guidance issued August 10, 1999 directs the use of the State’s invasive species list maintained by the California Invasive Species Council to define the invasive species that must be considered as part of the National Environmental Policy Act (NEPA) analysis for a proposed project.

2.3.5.2 Affected Environment

Invasive plant species, listed by the California Invasive Plant Council (Cal-IPC), occur in the ruderal habitats in and adjacent to the BSA. The Mediterranean California naturalized annual and perennial grassland habitat also is very likely to be dominated by invasive plant species. Cal-IPC defines high priority invasive species as those species that “have severe ecological impacts on physical processes, plant and animal communities, and vegetation structure” (NES). High priority invasive plant species that occur within or near the BSA include fennel *(Foeniculum vulgare)*, foxtail chess (*Bromus madritensis* ssp. *rubens*), bristly ox tongue (*Picris echioides*), wild oats (*Avena* sp.*)*, Russian thistle (*Salsola* sp.*)*, and yellow star thistle *(Centaurea solstitialis)* (NES).

2.3.5.3 Environmental Consequences

None of the species on the California List of Invasive Species is used by the Department for erosion control or landscaping. Therefore, the build alternative will not contribute to the spread of invasive species in the project area.

The no build alternative would not make improvements to SR 152 and therefore would not introduce or spread invasive species.

2.3.5.4 Avoidance, Minimization, and/or Mitigation Measures

1. The Department’s standard Best Management Practices would be followed to limit the spread of invasive species in the BSA. This includes inspection of equipment and washing, as needed, equipment before entering and exiting the project site, and using non-invasive types of species for erosion control. In the event that noxious weeds are disturbed or removed during construction-related activities, the contractor will contain the plant material associated with these noxious weeds and dispose of it in a manner that will not promote the spread of the species.

2.4 Cumulative Impacts

2.4.1 Regulatory Setting

Cumulative impacts are those that result from past, present, and reasonably foreseeable future actions, combined with the potential impacts of this proposed project. A cumulative effect assessment looks at the collective impacts posed by individual land use plans and projects. Cumulative impacts can result from individually minor but collectively substantial impacts taking place over a period of time.

Cumulative impacts to resources in the project area may result from residential, commercial, industrial, and highway development, as well as from agricultural development and the conversion to more intensive agricultural cultivation. These land use activities can degrade habitat and species diversity through consequences such as displacement and fragmentation of habitats and populations, alteration of hydrology, contamination, erosion, sedimentation, disruption of migration corridors, changes in water quality, and introduction or promotion of predators. They can also contribute to potential community impacts identified for the project, such as changes in community character, traffic patterns, housing availability, and employment.

California Environmental Quality Act (CEQA) Guidelines Section 15130 describes when a cumulative impact analysis is necessary and what elements are necessary for an adequate discussion of cumulative impacts. The definition of cumulative impacts under CEQA can be found in Section 15355 of the CEQA Guidelines. A definition of cumulative impacts under the National Environmental Policy Act (NEPA) can be found in 40 Code of Federal Regulations (CFR), Section 1508.7 of the Council on Environmental Quality (CEQ) Regulations.

2.4.1.1 Resources Analyzed

The Guidance for Preparers of Cumulative Impact Analysis describes how the cumulative impact analysis should focus on (1) resources substantially impacted by the proposed project or (2) resources currently in poor or declining health. The only resource discussed in this document that meets this criteria is the California tiger salamander (CTS).

2.4.1.2 Resource Study Area

A current population distribution boundary for CTS was established by placing a 1.3 mile buffer around known CTS occurrences. These occurrences were derived from the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDB). This method was chosen because CTS have been located at a maximum distance of 1.3 miles from the nearest breeding pond. This approach may result in an overestimate of habitat, but is not

significant since additional CTS breeding locations that were not surveyed nor reported may exist within the 1.3 mile boundary.

A 1.3 mile buffer around the project study limit was implemented to adequately analyze any potential direct or indirect cumulative effects to CTS. Any CTS population distribution area overlapping the project's 1.3 mile buffer area will be assumed to be affected by the project. The Resource Study Area (RSA) was established by combining both the 1.3 mile buffer around the project area and the population distribution area of CTS (Figure 2.4-1).

2.4.1.3 Historical Context/Current Status

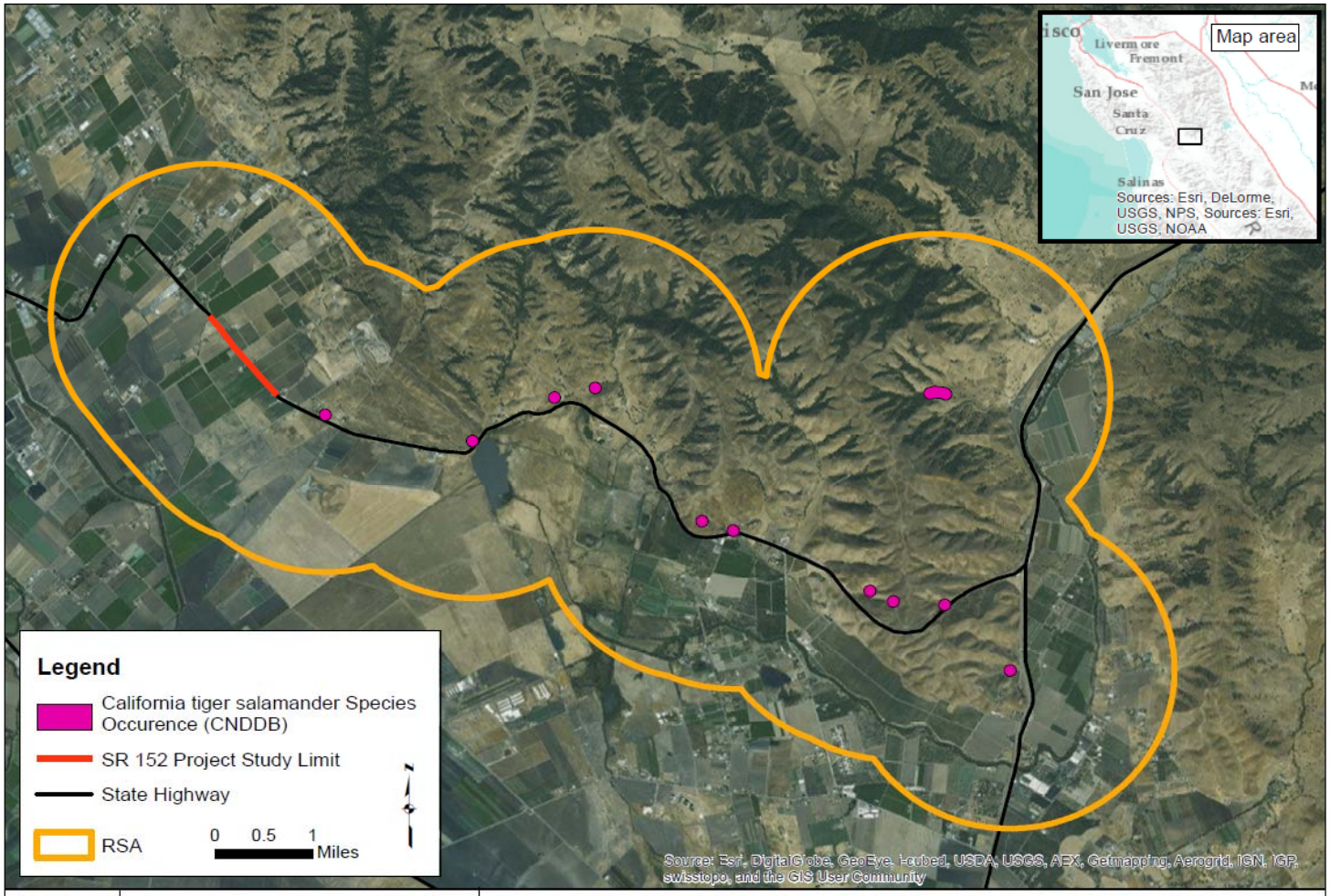
Historical as well as current knowledge of CTS abundance in California is limited. Since CTS spend most of their life underground and only a fraction of the population emerges during the breeding season, determining accurate population size is not practical. Therefore, distinguishing past and current population abundance is problematic. As an alternative, the size, density, and health of breeding pools and upland habitat can be used to estimate population size. The timeframe chosen for the historical analysis begins when the species was federally listed as threatened in 2004. This timeframe will allow the analysis to examine whether the health of the species has declined, stabilized, or improved since its federal listing.

CTS have disappeared from a significant portion of their range due to habitat loss and fragmentation from land use changes (e.g. grazing land to agriculture conversions, urbanization, suburban housing development, or converting grazing land to irrigated pasture).

Habitat isolation and fragmentation between or within watersheds have deterred the movement among adjacent breeding sites across intact terrestrial habitat. Aquatic and terrestrial habitat integrity and connectivity among populations are key elements for long-term CTS survival.

Historically, agriculture, rather than urban development, has contributed to the species' original decline within the RSA. Part of the RSA is within the San Ysidro Valley, which has been developed agriculturally since the early 20th century. In the Santa Clara County's current General Plan, the area within the RSA is designated as agricultural, hillside, and open space reserve. The portion of the RSA within San Benito County is classified as agricultural land in the county's general plan. Field surveys were completed and found the area to have little urban development with mostly agricultural and grazing land.

The Intergovernmental Review (IGR) Branch in District 4 and 5 were consulted to gather information on past developments within the RSA. The following projects were identified as having the potential to affect CTS: Pacheco Pass Transfer Station and Casa De Fruta Enhancement Project. The Pacheco Transfer Station will use seven acres within the existing inactive Pacheco Pass Landfill.



Caltrans	State Route 152 Shoulder Widening Project	California Tiger Salamander Resource Study Area

Figure 2.4-1: California Tiger Salamander Resource Study Area

No suitable habitat for CTS exists within this area, therefore it is assumed the project will not impact CTS. The Casa De Fruta enhancement project proposes to remove 19 trees near Pacheco creek to enhance visibility of the existing Casa de Fruta billboard. This project may potentially affect CTS through tree cutting activities. The project proposes to replace cut down trees within Pacheco Creek.

Although there has been little urban or agricultural development in the past decade, a number of transportation improvement projects have been constructed along the SR 152 corridor. Roads and barriers impede CTS dispersal between breeding ponds and upland habitat and a significant number of migrating CTS have been killed by automobiles. Several current and past transportation projects within the RSA were identified to have the potential to impact the health of CTS. These include Lovers Lane, Prunedale Intersection Improvements, 152 Truck Climbing Lane, 152/Ferguson Road Intersection Realignment and Signalization, 152/156 Intersection Improvement Project, SR 152 Improvement Project "B", and San Felipe Left-hand Turn Pocket.

The Lovers Lane project activities are expected to result in the incidental take of CTS individuals. The project is expected to cause permanent loss of 6.19 acres of upland/dispersal/foraging habitat. The project will compensate for the habitat loss by purchasing 19.05 acres of Covered Species credits from a CDFW-approved mitigation or conservation bank. Construction is expected to be completed in 2017.

The other projects did not individually result in any incremental impacts to CTS or the CTS-designated critical habitat that would jeopardize the continued existence of the species because they were designed to avoid impacts to CTS or were small-scale projects. The nature of the transportation projects and the limited urban and agricultural development within the past decade has resulted in the health of the resource to remain stable.

2.4.1.4 Proposed Project Impacts

The project limits are within dispersal distance of several drainages and ponds capable of supporting CTS. If CTS are present in the project limits during construction, take may occur in the form of capture, harm, harassment, injury, and mortality to adult CTS from habitat loss degradation, construction-related disturbance, and capture and relocation. The proposed project would result in temporary disturbance of 3.71 acres of poor quality upland and dispersal habitat. No new effects on CTS passage across SR 152 are expected with the future operation of the proposed action. All existing culverts that may allow CTS to pass under SR 152 would be retained. Suitable aquatic habitat occurs within 1.24 miles of the project limits; however, because of the high traffic volume on SR 152, this species is not likely to move successfully through the project area to get to ponds located on either side of the highway. Because of heavy traffic loads on the roadway, lack of suitable burrowing habitat, small mammal control, and presence of

predators within the project footprint, CTS are not expected to occur in this area outside the wet season. Therefore, this project will not have an adverse effect to CTS.

The no build alternative would not make improvements to SR 152 and therefore would not have a cumulative impact on CTS.

2.4.1.5 Reasonably Foreseeable Projects

Several transportation projects were identified as reasonably foreseeable to occur in the future within the RSA. They include Frazier Lake Road Interchange, Interchange flyover, Pacheco Station, SR 152 Resurfacing Project, North 156 Widening, Construct Passing Lanes, Hollister Route 156. These projects are reasonably foreseeable because they are either in the environmental or design phase of the Department's project process, and therefore are assumed to be constructed in the future.

Most projects are not within suitable CTS habitat. Therefore, they are not anticipated to have direct impacts to CTS. However, the Annual Average Daily Traffic (AADT) is expected to increase from 23,300 in 2009 to 31,000 vehicles by year 2029 within the project limits. More traffic on SR 152 can result in higher fatality rates of CTS migrating across the road to different breeding sites and upland habitat; traffic can therefore act as a barrier to species migration. These projects may have an indirect effect to the species by accommodating more motorists on the highway.

The North 156 Widening will not remain on pavement and has the potential to have impacts to CTS habitat. The project will widen Route 156 from two lanes to four, and could potentially have considerable impacts to CTS.

2.4.1.6 Cumulative Impacts

Current and reasonably foreseeable projects would result in a cumulative total of 6.19 acres of permanent impacts to suitable CTS habitat. Most projects have committed to compensatory mitigation to lessen or offset the damage to species' habitat or have incorporated avoidance and minimization measures to reduce impacts to CTS. These projects will not inhibit the health of CTS and will not contribute to the cumulative impact of the species. Agricultural and urban development is limited within the RSA and therefore does not impact the health of the species. As described in Section 2.4.1.4, the proposed project is not expected to have an adverse effect on CTS because CTS are not expected to occur in the project area outside of the wet season due to lack of suitable habitat. Based on this analysis and review, under CEQA, no considerable contributions to cumulative impacts to CTS would result from the proposed SR 152 Shoulder Widening Project.

2.4.1.7 Avoidance and Minimization Measures for California Tiger Salamander

1. The proposed project would implement species-specific measures to avoid and minimize effects on CTS as stated in Section 2.3.4 (Threatened and Endangered Species).

2.5 Climate Change

Climate change refers to long-term changes in temperature, precipitation, wind patterns, and other elements of the earth's climate system. An ever-increasing body of scientific research attributes these climatological changes to greenhouse gas (GHG) emissions, particularly those generated from the production and use of fossil fuels.

While climate change has been a concern for several decades, the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations and World Meteorological Organization in 1988 has led to increased efforts devoted to GHG emissions reduction and climate change research and policy. These efforts are primarily concerned with the emissions of GHGs generated by human activity including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), tetrafluoromethane, hexafluoroethane, sulfur hexafluoride (SF_6), HFC-23 (fluoroform), HFC-134a (s, s, s, 2-tetrafluoroethane), and HFC-152a (difluoroethane).

In the U.S., the main source of GHG emissions is electricity generation, followed by transportation. In California, however, transportation sources (including passenger cars, light-duty trucks, other trucks, buses, and motorcycles make up the largest source of GHG-emitting sources. The dominant GHG emitted is CO_2, mostly from fossil fuel combustion.

There are typically two terms used when discussing the impacts of climate change: “Greenhouse Gas Mitigation” and “Adaptation.” "Greenhouse Gas Mitigation" is a term for reducing GHG emissions to reduce or "mitigate" the impacts of climate change. “Adaptation" refers to the effort of planning for and adapting to impacts resulting from climate change (such as adjusting transportation design standards to withstand more intense storms and higher sea levels)[3].

There are four primary strategies for reducing GHG emissions from transportation sources: 1) improving the transportation system and operational efficiencies, 2) reducing travel activity, 3) transitioning to lower GHG-emitting fuels, and 4) improving vehicle technologies/efficiency. To be most effective, all four strategies should be pursued cooperatively[4].

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[3] http://climatechange.transportation.org/ghg_mitigation/
[4] http://www.fhwa.dot.gov/environment/climate_change/mitigation/

2.5.1 Regulatory Setting

State

With the passage of several pieces of legislation including State Senate and Assembly bills and Executive Orders, California launched an innovative and proactive approach to dealing with GHG emissions and climate change.

Assembly Bill 1493 (AB 1493), Pavley, Vehicular Emissions: Greenhouse Gases, 2002: This bill requires the California Air Resources Board (ARB) to develop and implement regulations to reduce automobile and light truck GHG emissions. These stricter emissions standards were designed to apply to automobiles and light trucks beginning with the 2009-model year.

Executive Order (EO) S-3-05 (June 1, 2005): The goal of this EO is to reduce California's GHG emissions to 1) year 2000 levels by 2010, 2) year 1990 levels by 2020, and 3) 80 percent below the year 1990 levels by 2050. In 2006, this goal was further reinforced with the passage of Assembly Bill 32.

Assembly Bill 32 (AB 32), Núñez and Pavley, The Global Warming Solutions Act of 2006: AB 32 sets the same overall GHG emissions reduction goals as outlined in EO S-3-05, while further mandating that ARB create a scoping plan and implement rules to achieve "real, quantifiable, cost-effective reductions of greenhouse gases."

Executive Order S-20-06 (October 18, 2006): This order establishes the responsibilities and roles of the Secretary of the California Environmental Protection Agency (Cal/EPA) and state agencies with regard to climate change.

Executive Order S-01-07 (January 18, 2007): This order set forth the low carbon fuel standard for California. Under this EO, the carbon intensity of California's transportation fuels is to be reduced by at least 10 percent by 2020.

Senate Bill 97 (SB 97) Chapter 185, 2007, Greenhouse Gas Emissions: This bill required the Governor's Office of Planning and Research (OPR) to develop recommended amendments to the California Environmental Quality Act (CEQA) Guidelines for addressing GHG emissions. The amendments became effective on March 18, 2010.

Senate Bill 375 (SB 375), Chapter 728, 2008, Sustainable Communities and Climate Protection: This bill requires the California Air Resources Board (CARB) to set regional emissions reduction targets from passenger vehicles. The Metropolitan Planning Organization (MPO) for each region must then develop a "Sustainable Communities Strategy" (SCS) that integrates transportation, land-use, and housing policies to plan for the achievement of the emissions target for their region.

Senate Bill 391 (SB 391) Chapter 585, 2009 California Transportation Plan: This bill requires the State's long-range transportation plan to meet California's climate change goals under AB 32.

Federal

Although climate change and GHG reduction are a concern at the federal level, currently no regulations or legislation have been enacted specifically addressing GHG emissions reductions and climate change at the project level. Neither the United States Environmental Protection Agency (U.S. EPA) nor the Federal Highway Administration (FHWA) has issued explicit guidance or methods to conduct project-level GHG analysis.[5] FHWA supports the approach that climate change considerations should be integrated throughout the transportation decision-making process–from planning through project development and delivery. Addressing climate change mitigation and adaptation up front in the planning process will assist in decision-making and improve efficiency at the program level, and will inform the analysis and stewardship needs of project-level decision-making. Climate change considerations can be integrated into many planning factors, such as supporting economic vitality and global efficiency, increasing safety and mobility, enhancing the environment, promoting energy conservation, and improving the quality of life.

The four strategies outlined by FHWA to lessen climate change impacts correlate with efforts that the state is undertaking to deal with transportation and climate change; these strategies include improved transportation system efficiency, cleaner fuels, cleaner vehicles, and a reduction in travel activity.

Climate change and its associated effects are also being addressed through various efforts at the federal level to improve fuel economy and energy efficiency, such as the "National Clean Car Program" and EO 13514 - *Federal Leadership in Environmental, Energy and Economic Performance*.

Executive Order 13514 (October 5, 2009): This order is focused on reducing greenhouse gases internally in federal agency missions, programs and operations, but also directs federal agencies to participate in the Interagency Climate Change Adaptation Task Force, which is engaged in developing a national strategy for adaptation to climate change.

U.S. EPA's authority to regulate GHG emissions stems from the U.S. Supreme Court decision in Massachusetts v. EPA (2007). The Supreme Court ruled that GHGs meet the definition of air pollutants under the existing Clean Air Act and must be regulated if these gases could be

[5] To date, no national standards have been established regarding mobile source GHGs, nor has U.S. EPA established any ambient standards, criteria or thresholds for GHGs resulting from mobile sources.

reasonably anticipated to endanger public health or welfare. Responding to the Court's ruling, U.S. EPA finalized an endangerment finding in December 2009. Based on scientific evidence it found that six greenhouse gases constitute a threat to public health and welfare. Thus, it is the Supreme Court's interpretation of the existing Act and EPA's assessment of the scientific evidence that form the basis for EPA's regulatory actions. U.S. EPA in conjunction with NHTSA issued the first of a series of GHG emission standards for new cars and light-duty vehicles in April 2010.[6]

The U.S. EPA and the National Highway Traffic Safety Administration (NHTSA) are taking coordinated steps to enable the production of a new generation of clean vehicles with reduced GHG emissions and improved fuel efficiency from on-road vehicles and engines. These next steps include developing the first-ever GHG regulations for heavy-duty engines and vehicles, as well as additional light-duty vehicle GHG regulations.

The final combined standards that made up the first phase of this national program apply to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. The standards implemented by this program are expected to reduce GHG emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012-2016).

On August 28, 2012, U.S. EPA and NHTSA issued a joint Final Rulemaking to extend the National Program for fuel economy standards to model year 2017 through 2025 passenger vehicles. Over the lifetime of the model year 2017-2025 standards this program is projected to save approximately four billion barrels of oil and two billion metric tons of GHG emissions.

The complementary U.S. EPA and NHTSA standards that make up the Heavy-Duty National Program apply to combination tractors (semi trucks), heavy-duty pickup trucks and vans, and vocational vehicles (including buses and refuse or utility trucks). Together, these standards will cut greenhouse gas emissions and domestic oil use significantly. This program responds to President Barack Obama's 2010 request to jointly establish greenhouse gas emissions and fuel efficiency standards for the medium- and heavy-duty highway vehicle sector. The agencies estimate that the combined standards will reduce CO2 emissions by about 270 million metric tons and save about 530 million barrels of oil over the life of model year 2014 to 2018 heavy duty vehicles.

[6] http://www.c2es.org/federal/executive/epa/greenhouse-gas-regulation-faq

2.5.2 Project Analysis

An individual project does not generate enough GHG emissions to significantly influence global climate change. Rather, global climate change is a cumulative impact. This means that a project may contribute to a potential impact through its *incremental* change in emissions when combined with the contributions of all other sources of GHG.[7] In assessing cumulative impacts, it must be determined if a project's incremental effect is "cumulatively considerable" (CEQA Guidelines Sections 15064(h)(1) and 15130). To make this determination, the incremental impacts of the project must be compared with the effects of past, current, and probable future projects. To gather sufficient information on a global scale of all past, current, and future projects to make this determination is a difficult, if not impossible, task.

The AB 32 Scoping Plan mandated by AB 32 includes the main strategies California will use to reduce GHG emissions. As part of its supporting documentation for the Draft Scoping Plan, the ARB released the GHG inventory for California (forecast last updated: October 28, 2010). The forecast is an estimate of the emissions expected to occur in 2020 if none of the foreseeable measures included in the Scoping Plan were implemented. The base year used for forecasting emissions is the average of statewide emissions in the GHG inventory for 2006, 2007, and 2008.

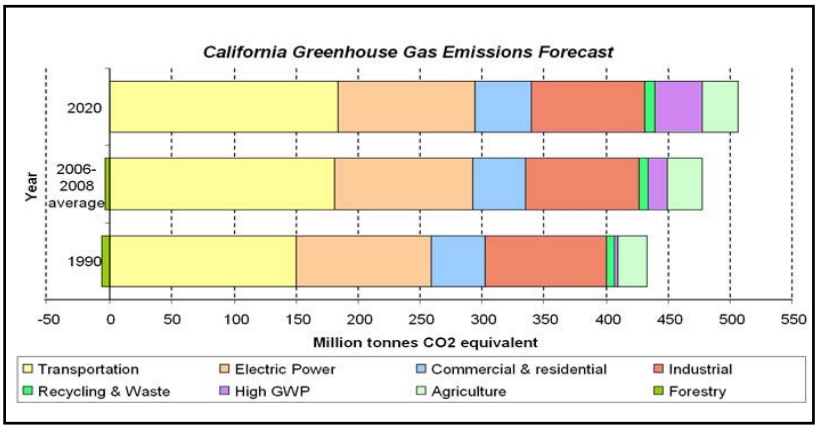

Figure 2.5-1: California Greenhouse Gas Forecast

Source: http://www.arb.ca.gov/cc/inventory/data/forecast.htm

The Department and its parent agency, the Transportation Agency, have taken an active role in addressing GHG emission reduction and climate change. Recognizing that 98 percent of

[7] This approach is supported by the AEP: *Recommendations by the Association of Environmental Professionals on How to Analyze GHG Emissions and Global Climate Change in CEQA Documents* (March 5, 2007), as well as the South Coast Air Quality Management District (Chapter 6: The CEQA Guide, April 2011) and the U.S. Forest Service (Climate Change Considerations in Project Level NEPA Analysis, July 13, 2009).

California's GHG emissions are from the burning of fossil fuels and 40 percent of all human made GHG emissions are from transportation, the Department has created and is implementing the Climate Action Program at Caltrans that was published in December 2006.[8]

The purpose of the purposed project is to improve safety for the traveling public along State Route 152 in Santa Clara County. The project proposes to widen the shoulder in both directions, install ground-in rumble strips within the widened shoulders, construct a soft median barrier in the centerline, and relocate the drainage ditch on the westbound shoulder of SR 152. These activities will not increase or change traffic volumes and is not expected to result in an overall increase of operational GHG emissions.

Construction Emissions

Greenhouse gas emissions for transportation projects can be divided into those produced during construction and those produced during operations. Construction GHG emissions include emissions produced as a result of material processing, emissions produced by on-site construction equipment, and emissions arising from traffic delays due to construction. These emissions will be produced at different levels throughout the construction phase; their frequency and occurrence can be reduced through innovations in plans and specifications and by implementing better traffic management during construction phases.

In addition, with innovations such as longer pavement lives, improved traffic management plans, and changes in materials, the GHG emissions produced during construction can be mitigated to some degree by longer intervals between maintenance and rehabilitation events. The project will comply with the 2010 Standard Specifications relating to air quality and dust control. The project must comply with air pollution control rules, regulations, ordinances, and statutes.

CEQA Conclusion

While the project will result in a slight increase in GHG emissions during construction, it is anticipated that the project will not result in any increase in operational GHG emissions. While it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct impact and its contribution on the cumulative scale to climate change, Caltrans is firmly committed to implementing measures to help reduce GHG emissions. These measures are outlined in the following section.

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[8] Caltrans Climate Action Program is located at the following web address: http://www.dot.ca.gov/hq/tpp/offices/ogm/key_reports_files/State_Wide_Strategy/Caltrans_Climate_Action_Program.pdf

2.5.3 Greenhouse Gas Reduction Strategies

The Department continues to be involved on the Governor's Climate Action Team as the ARB works to implement Executive Orders S-3-05 and S-01-07 and help achieve the targets set forth in AB 32. Many of the strategies the Department is using to help meet the targets in AB 32 come from then-Governor Arnold Schwarzenegger's Strategic Growth Plan for California. The Strategic Growth Plan targeted a significant decrease in traffic congestion below 2008 levels and a corresponding reduction in GHG emissions, while accommodating growth in population and the economy. The Strategic Growth Plan relies on a complete systems approach to attain CO_2 reduction goals: system monitoring and evaluation, maintenance and preservation, smart land use and demand management, and operational improvements as shown in Figure 2-5.2: The Mobility Pyramid.

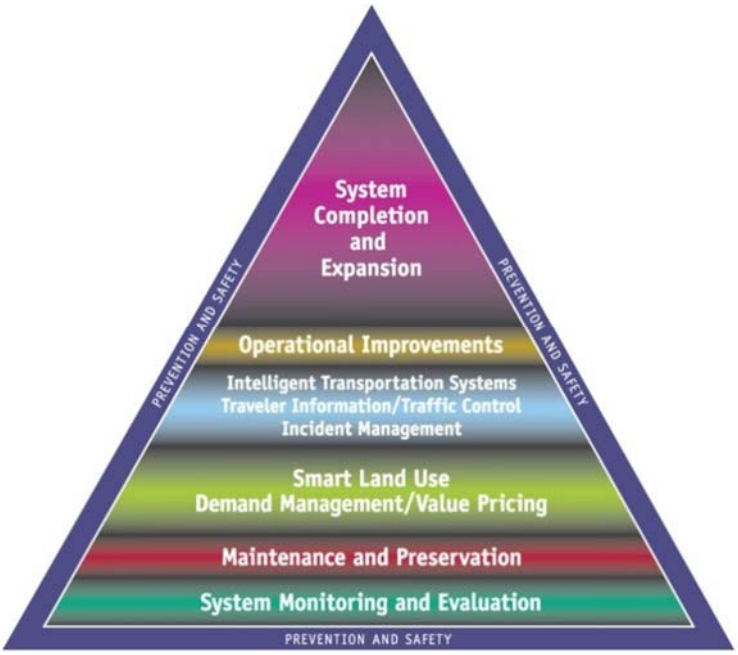

Figure 2.5-2: Mobility Pyramid

The Department is supporting efforts to reduce vehicle miles traveled by planning and implementing smart land use strategies: job/housing proximity, developing transit-oriented communities, and high-density housing along transit corridors. The Department works closely with local jurisdictions on planning activities, but does not have local land use planning authority. The Department assists efforts to improve the energy efficiency of the transportation sector by increasing vehicle fuel economy in new cars, light and heavy-duty trucks; the Department is doing this by supporting ongoing research efforts at universities, by supporting legislative efforts to increase fuel economy, and by participating on the Climate Action Team. It

is important to note, however, that control of fuel economy standards is held by the U.S. EPA and ARB.

The Department is also working towards enhancing the State's transportation planning process to respond to future challenges. Similar to requirements for regional transportation plans under Senate Bill (SB) 375 (Steinberg 2008), SB 391(Liu 2009) requires the State's long-range transportation plan to meet California's climate change goals under Assembly Bill (AB) 32.

The California Transportation Plan (CTP) is a statewide, long-range transportation plan to meet our future mobility needs and reduce greenhouse gas (GHG) emissions. The CTP defines performance-based goals, policies, and strategies to achieve our collective vision for California's future, statewide, integrated, multimodal transportation system.

The purpose of the CTP is to provide a common policy framework that will guide transportation investments and decisions by all levels of government, the private sector, and other transportation stakeholders. Through this policy framework, the CTP 2040 will identify the statewide transportation system needed to achieve maximum feasible GHG emission reductions while meeting the State's transportation needs.

Table 2.5-1 summarizes the Departmental and statewide efforts that the Department is implementing to reduce GHG emissions. More detailed information about each strategy is included in the Climate Action Program at Caltrans (December 2006).

Caltrans Director's Policy 30 (DP-30) Climate Change (June 22, 2012): is intended to establish a Department policy that will ensure coordinated efforts to incorporate climate change into Departmental decisions and activities.

Caltrans Activities to Address Climate Change (April 2013)[9] provides a comprehensive overview of activities undertaken by Caltrans statewide to reduce greenhouse gas emissions resulting from agency operations.

[9] http://www.dot.ca.gov/hq/tpp/offices/orip/climate_change/projects_and_studies.shtml

Strategy	Program	Partnership		Method/Process	Estimated CO_2 Savings Million Metric Tons (MMT)	
		Lead	Agency		2010	2020
Smart Land Use	Intergovernmental Review (IGR)	Caltrans	Local governments	Review and seek to mitigate development proposals	Not Estimated	Not Estimated
	Planning Grants	Caltrans	Local and regional agencies & other stakeholders	Competitive selection process	Not Estimated	Not Estimated
	Regional Plans and Blueprint Planning	Regional Agencies	Caltrans	Regional plans and application process	0.975	7.8
Operational Improvements & Intelligent Transportation System (ITS) Deployment	Strategic Growth Plan	Caltrans	Regions	State ITS; Congestion Management Plan	0.07	2.17
Mainstream Energy & GHG into Plans and Projects	Office of Policy Analysis & Research; Division of Environmental Analysis	Interdepartmental effort		Policy establishment, guidelines, technical assistance	Not Estimated	Not Estimated
Educational & Information Program	Office of Policy Analysis & Research	Interdepartmental, CalEPA, ARB, CEC		Analytical report, data collection, publication, workshops, outreach	Not Estimated	Not Estimated
Fleet Greening & Fuel Diversification	Division of Equipment	Department of General Services		Fleet Replacement B20 B100	0.0045	0.0065 0.045 0.0225
Non-vehicular Conservation Measures	Energy Conservation Program	Green Action Team		Energy Conservation Opportunities	0.117	0.34
Portland Cement	Office of Rigid Pavement	Cement and Construction Industries		2.5 % limestone cement mix 25% fly ash cement mix > 50% fly ash/slag mix	1.2 0.36	4.2 3.6
Goods Movement	Office of Goods Movement	Cal EPA, ARB, BT&H, MPOs		Goods Movement Action Plan	Not Estimated	Not Estimated
Total					2.72	18.18

Table 2.5-1: Climate Change/CO2 Reduction Strategies

2.5.4 Adaptation Strategies

"Adaptation strategies" refer to how the Department and others can plan for the effects of climate change on the state's transportation infrastructure and strengthen or protect the facilities from damage. Climate change is expected to produce increased variability in precipitation, rising temperatures, rising sea levels, variability in storm surges and intensity, and the frequency and intensity of wildfires. These changes may affect the transportation infrastructure in various ways, such as damage to roadbeds from longer periods of intense heat; increasing storm damage from flooding and erosion; and inundation from rising sea levels. These effects will vary by location and may, in the most extreme cases, require that a facility be relocated or redesigned. There may also be economic and strategic ramifications as a result of these types of impacts to the transportation infrastructure.

At the federal level, the Climate Change Adaptation Task Force, co-chaired by the White House Council on Environmental Quality (CEQ), the Office of Science and Technology Policy (OSTP), and the National Oceanic and Atmospheric Administration (NOAA), released its interagency task force progress report on October 28, 2011[10], outlining the federal government's progress in expanding and strengthening the Nation's capacity to better understand, prepare for, and respond to extreme events and other climate change impacts. The report provides an update on actions in key areas of federal adaptation, including: building resilience in local communities, safeguarding critical natural resources such as freshwater, and providing accessible climate information and tools to help decision-makers manage climate risks. Climate change adaptation must also involve the natural environment as well. Efforts are underway on a statewide-level to develop strategies to cope with impacts to habitat and biodiversity through planning and conservation. The results of these efforts will help California agencies plan and implement mitigation strategies for programs and projects.

On November 14, 2008, then-Governor Arnold Schwarzenegger signed EO S-13-08, which directed a number of state agencies to address California's vulnerability to sea level rise caused by climate change. This EO set in motion several agencies and actions to address the concern of sea level rise.

In addition to addressing projected sea level rise, the California Natural Resources Agency (Resources Agency) was directed to coordinate with local, regional, state and federal public and private entities to develop The California Climate Adaptation Strategy (Dec 2009)[11], which summarizes the best-known science on climate change impacts to California, assesses

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[10] http://www.whitehouse.gov/administration/eop/ceq/initiatives/adaptation

[11] http://www.energy.ca.gov/2009publications/CNRA-1000-2009-027/CNRA-1000-2009-027-F.PDF

California's vulnerability to the identified impacts, and then outlines solutions that can be implemented within and across state agencies to promote resiliency.

The strategy outline is in direct response to EO S-13-08 that specifically asked the Resources Agency to identify how state agencies can respond to rising temperatures, changing precipitation patterns, sea level rise, and extreme natural events. Numerous other state agencies were involved in the creation of the Adaptation Strategy document, including the California Environmental Protection Agency; Business, Transportation and Housing; Health and Human Services; and the Department of Agriculture. The document is broken down into strategies for different sectors that include: Public Health; Biodiversity and Habitat; Ocean and Coastal Resources; Water Management; Agriculture; Forestry; and Transportation and Energy Infrastructure. As data continues to be developed and collected, the state's adaptation strategy will be updated to reflect current findings.

The National Academy of Science was directed to prepare a Sea Level Rise Assessment Report[12] to recommend how California should plan for future sea level rise. The report was released in June 2012 and included:

- Relative sea level rise projections for California, Oregon and Washington taking into account coastal erosion rates, tidal impacts, El Niño and La Niña events, storm surge and land subsidence rates.
- The range of uncertainty in selected sea level rise projections.
- A synthesis of existing information on projected sea level rise impacts to state infrastructure (such as roads, public facilities and beaches), natural areas, and coastal and marine ecosystems.
- A discussion of future research needs regarding sea level rise.

In 2010, interim guidance was released by The Coastal Ocean Climate Action Team (CO-CAT) as well as Caltrans as a method to initiate action and discussion of potential risks to the state's infrastructure due to projected sea level rise. Subsequently, CO-CAT updated the Sea Level Rise guidance to include information presented in the National Academies Study.

All state agencies that are planning to construct projects in areas vulnerable to future sea level rise are directed to consider a range of sea level rise scenarios for the years 2050 and 2100 to assess project vulnerability and, to the extent feasible, reduce expected risks and increase resiliency to sea level rise. Sea level rise estimates should also be used in conjunction with

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[12] *Sea Level Rise for the Coasts of California, Oregon, and Washington: Past, Present, and Future* (2012) is available at http://www.nap.edu/catalog.php?record_id=13389.

information on local uplift and subsidence, coastal erosion rates, predicted higher high water levels, storm surge and storm wave data

All projects that have filed a Notice of Preparation as of the date of EO S-13-08, and/or are programmed for construction funding from 2008 through 2013, or are routine maintenance projects may, but are not required to, consider these planning guidelines. The proposed project is outside the coastal zone and direct impacts to transportation facilities due to projected sea level rise are not expected.

Executive Order S-13-08 also directed the Business, Transportation, and Housing Agency to prepare a report to assess vulnerability of transportation systems to sea level rise affecting safety, maintenance and operational improvements of the system, and economy of the state. The Department continues to work on assessing the transportation system vulnerability to climate change, including the effect of sea level rise.

Currently, the Department is working to assess which transportation facilities are at greatest risk from climate change effects. However, without statewide planning scenarios for relative sea level rise and other climate change effects, the Department has not been able to determine what change, if any, may be made to its design standards for its transportation facilities. Once statewide planning scenarios become available, the Department will be able review its current design standards to determine what changes, if any, may be needed to protect the transportation system from sea level rise.

Climate change adaptation for transportation infrastructure involves long-term planning and risk management to address vulnerabilities in the transportation system from increased precipitation and flooding; the increased frequency and intensity of storms and wildfires; rising temperatures; and rising sea levels. The Department is an active participant in the efforts being conducted in response to EO S-13-08 and is mobilizing to be able to respond to the National Academy of Science Sea Level Rise Assessment Report.

Chapter 3 Comments and Coordination

3.1 Coordination

Early and continuing coordination with the general public and public agencies is an essential part of the environmental process. It helps planners determine the necessary scope of environmental documentation and the level of analysis required, and identify potential impacts and avoidance, minimization and/or mitigation measures and related environmental requirements. Agency consultation and public participation for this project have been accomplished through a variety of formal and informal methods, including Project Development Team (PDT) meetings, interagency coordination meetings, and public outreach. This chapter summarizes the results of the Department's efforts to fully identify, address, and resolve project-related issues through early and continuing coordination.

The Department circulated the IS/EA for public review and comment on September 16, 2014. Each of the agencies listed in Chapter 5 and several property owners in the project's vicinity received printed or electronic copies of the document and information about the public meeting. In addition, the public meeting was advertised through newspaper ads in the following newspaper on the following days: September 16, 2014 and October 2, 2014 in the San Jose Mercury Newspaper.

A public meeting was held to inform the public of the project and its potential impacts. The meeting was held at Christopher High School, 850 Day Rd, Gilroy, CA 95020 from 6pm to 8pm on October 9, 2014. The meeting was an open house style, with multiple display boards for review and discussion. Project staff engaged community members in one-on-one conversations. Five community members attended the meeting. Most comments were regarding the project's potential affects to properties of current residences. Other comments included confusion about the project description and potential affects to plant species. These comments have been addressed in Section 3.2 "Comments and Responses" in this document. Comments on this document were accepted through October 16, 2014 to provide a 30-day public review period.

A field review with the Department's USFWS liaison was conducted on February 7, 2014. A USFWS species list was obtained on July 10, 2014 and on January 21, 2015. On July 1, 2014 the Department submitted a Biological Assessment to USFWS to assess potential project effects on the California tiger salamander and California red-legged frog. The Department received a Biological Opinion (Appendix I) from the USFWS on June 18, 2015.

Consultation with the US Department of Agriculture was conducted on January 31, 2013 by providing form AD-1006 (Appendix D), maps, and a transmittal letter to notify USDA of potential impacts to farmlands. The form was completed, and submitted to USDA on February

21, 2014. The California Department of Conservation was notified of the proposed Williamson Act farmland acquisition on February 5, 2014. On March 18, 2014 the Department received a letter from the California Department of Conservation with their comments and recommendations for the Department's actions. The Department will provide notice to the Department of Conservation within 10 days of the properties being acquired.

The Department contacted the Native American Heritage Commission (NAHC) on February 19, 2014, requesting a review of their Sacred Lands file to determine if there were known historically significant sites within or near the APE of the proposed project. The NAHC responded on February 27, 2014 and reported no Native American cultural resources in the project area. A list of individuals was also provided by the NAHC and they were contacted by letter and phone. No comments were received by these individuals.

3.2 Comments and Responses

The Department circulated the IS/EA to the public from September 16, 2014 to October 16, 2014. A total of three comments were received regarding the project. Responses were developed and this environmental document was updated accordingly. Comments and responses from the Department are listed below. A copy of the final document will be distributed to the various stakeholders including local, State, and Federal elected officials and agencies, and residents within the project vicinity.

Comment 1 Mary Ann Milias

Denardo, Eric@DOT

From: Mary Ann Milias [maryannmilias@hotmail.com]
Sent: Monday, September 29, 2014 4:37 PM
To: Denardo, Eric@DOT
Subject: State Route 152 Shoulder Widening Project

Dear Mr. Denardo,
As we will be unable to attend the meeting on October 9, we are putting our thoughts about the above-mentioned project in this email.

C-1.1 We represent Assessor's Parcel Number 841-26-025 from whom the DOT proposes to acquire 0.17 acre. We absolutely disagree with this proposal especially due to the already close proximity of the house on the property to the highway. In addition, the DOT as well as the EPA should understand that **if in fact the proposal is to acquire property right in front of the house**, fumes from the passing cars, diesel trucks, etc.

C-1.2 would be unacceptable for the occupants of the house (3420 Pacheco Pass Hwy). Also, exiting the property driveway to access Route 152 would involve not only special care but the increased possibility of an accident.

C-1.3 While there is lots of information in the proposal, it is not clear to us exactly what part of our property is affected. A return email would be helpful in clarifying this for us. Regardless, we find the project unacceptable.

C-1.4 The widening, **if it proceeds** in spite of our opposition, should take space from the other side of Pacheco Pass HWY 152 where there are no homes in such close proximity to the road.

C-1.5 Finally, for the last 60+ years Pacheco Pass traffic has increased dramatically and continues to be a nuisance to those of us who have grown up on Highway 152 (3020 Pacheco Pass), a mere 2 lane road. We have also been fierce proponents along with other property owners that a "freeway" (two lane to four lane) should be constructed beginning at the Bloomfield south 101 exit across to the Pacheco Pass. Both traffic congestion as well as traffic accidents would dramatically decrease vs. a piece meal approach suggested by your report.

Sincerely,

Mary Ann Milias St. Peter, TEE
Mary Ann Milias, attorney in fact for M. Casey, M. Casey, E. Potamianos, K. Spengler.

Response to Comment 1

C-1.1

The Department understands your concern regarding the fumes from vehicles on SR 152. However, the passing cars and trucks will not be any closer to your property. This project will simply widen the shoulders to standard length of 8ft where needed. This will better a motorist's ability to recover back onto the travel lane if they swerve out of it. It will not move the travel lanes closer to your property. The project description has been updated for clarity on page 1-8.

C-1.2

The proposed project should allow easier access to SR 152 from your property's driveway because of the new widened shoulders.

C-1.3

An updated map of the Right of Way acquisition has been added to the IS/EA for clarity on pages 1-6 and 1-7. The Department is currently proposing to acquire a segment of your property to make safety improvements to SR 152 as specified in the project description on pages 1-4 to 1-8. The Department will work towards minimizing its impacts to residences in the project area and will consider your comment during the design phase when details of the utility relocation are figured out

C-1.4

The Department is proposing to widen the shoulder on both sides of SR 152. Widening only on the westbound side of SR 152 (where no homes are located) would require a realignment of the roadway and increase the project's costs substantially.

C-1.5

The Department notes your suggestion that an alternative project be constructed.

Comment 2 Diana Roberts

Caltrans

State Route 152 Shoulder Widening
October 9, 2014 – Public Meeting

COMMENT FORM

Please leave your comments with staff during the meeting or mail it to the following address by October 16, 2014:

Eric DeNardo, Associate Environmental Planner
Department of Transportation, Environmental Planning, MS 8B
P.O. Box 23660
Oakland, CA 94623

You can also email your comments to eric.denardo@dot.ca.gov. Please include your name, affiliation (if applicable), and address with your comments.

Name: Diana Roberts Date: 10/9/14

Affiliation (if applicable):

Address: 354 N 14th St, San Jose CA 95112

Email: dianacroberts@gmail.com

Comment:

C-2.1 p.2-39 The IS states that b/c the project would not make improvements to SR-152, no invasive species would be introduced. However, ground disturbance can allow nonnative seeds to take hold, and construction vehicles can track in seeds ~~on~~ in dirt on the tires. The measure should explain the Department's BMP to demonstrate invasive plant species would not be spread.

Please continue on back if necessary.

For more information, visit http://www.dot.ca.gov/dist4/envdocs.htm or email eric.denardo@dot.ca.gov.

If this BMP is an environmental commitment, it should be included in Appendix G of the IS.

C-2.2 There was no discussion in the text of listed plants, whereas several are included in Appendix 4. Several of these are endangered. The text should discuss presence or absence on the project site.

C-2.3 The discussion of Haz notes the presence of contaminants in the soil. No BMPs/environmental commitments were included to minimize mobilization of dust during construction - which will take place during the dry season. This BMP should be added to the project description & listed in App G.

C-2.4 The doc notes that there are trees in the project site, but does not mention whether trees would be removed. If so, the potential aesthetic impact should be discussed and disclosed.

Response to Comment 2

C-2.1

On page 2-39 of the draft environmental document it states the "No Build" alternative would not make improvements. The Build alternative includes improvements to SR 152. The Department's Best Management Practices (BMP) would limit the spread of invasive species. The ECR and page 2-41 has been updated to include language regarding invasive species.

C-2.2

A discussion of listed plant species is in the beginning of Chapter 2 on page 2-2. The paragraph states that reconnaissance surveys determined listed plant species were not present within the project location. The survey also determined no suitable habitat was present for listed plant species in the project location.

C-2.3

The Department's has the following Standard Specification which all projects must follow: "Excavation, transportation or handling of material containing hazardous waste or contamination must result in no visible dust migration. Have a water truck or tank on the job site at all times while clearing and grubbing and performing earthwork operations in work areas containing hazardous waste of contamination." This is a standard practice contractors must follow on all projects. Including this Standard Specification in the ECR is not necessary.

C-2.4

The project is currently not proposing to cut down the trees along SR 152. This has been clarified in the project description on page 1-8.

Comment 3 Santa Clara Department of Environmental Health

Denardo, Eric@DOT

From: Wien, Martha [Martha.Wien@deh.sccgov.org]
Sent: Thursday, October 16, 2014 4:20 PM
To: Denardo, Eric@DOT
Subject: SR-152 Widening NOI-MND

Follow Up Flag: Follow up
Flag Status: Completed

Good afternoon Eric,

C-3.1 I am sorry for the delay in my response, I realized it closed yesterday. There appears to be a couple of homes that are up near the edge of the road and it was hard to tell how impacted they would be with the widening. I was unable to find all the information regarding wells and septic systems for those site, so the only comment for Santa Clara Department of Environmental Health Consumer Protection Division on this would be to insure that all set-backs to drinking water wells and septic systems are maintained or mitigate.

Please do not hesitate to contact us if you have any questions. Our main number is 408-918-3409.

Martha Wien
Supervising Environmental Health Specialist
Consumer Protection Division

County of Santa Clara
Department of Environmental Health

Response to Comment 3

C-3.1

The proposed project is not anticipated to impact any drinking water wells and/or septic systems.

Chapter 4 List of Preparers

The following Caltrans staff contributed to the preparation of this IS/EA:

Robert Vogt, Associate Environmental Planner, Office of Biological Science and Permits

Chris Pincetich, Environmental Planner, Office of Biological Science and Permits

Chris Jannusch, Associate Environmental Planner, Office of Biological Science and Permits

Lindsay Hartman, Associate Environmental Planner, Office of Cultural Resource Studies

Alex Bevk, Associate Environmental Planner, Office of Cultural Resource Studies

Helen Blackmore, Environmental Planner, Office of Cultural Resource Studies

Ray Boyer, District Branch Chief, Hazardous Waste, Office of Environmental Engineering

Thomas Packard, Landscape Architect, Office of Landscape Architecture

Kimberly White, Landscape Architect, Office of Landscape Architecture

Mo Faghihi, Transportation Engineer, Office of Environmental Engineering

Sean Poirier, Associate Environmental Planner, Office of Environmental Analysis

Alene Pearson, Associate Environmental Planner, Office of Environmental Analysis

Eric DeNardo, Associate Environmental Planner, Office of Environmental Analysis

Wahida Rashid, Senior Environmental Planner, Office of Environmental Analysis

Cristin Hallissy, Senior Environmental Planner, Office of Environmental Analysis

Chapter 5 Distribution List

The following individuals, agencies, and organizations received printed or electronic copies of this document. Agency names marked with an asterisk (*) received copies through the State Clearinghouse.

The Honorable Dianne Feinstein
United States Senate
One Post Street, Suite 2450
San Francisco, CA 94104

The Honorable Barbara Boxer
United States Senate
70 Washington Street, Suite 203
Oakland, CA 94607

The Honorable Zoe Lofgren
United States Congress, 19th District
635 North First Street, Suite B
San Jose, CA 95112

The Honorable Sam Farr
United States Congress, 20th District
100 West Alisal Street,
Salinas, CA 93901

The Honorable Bill Monning
California State Senate, 17th District
99 Pacific Street, Suite 575-F
Monterey, CA 93940

The Honorable Luis Alejo,
California State Assembly, 30th District
100 West Alisal Street, Suite 134
Salinas, CA 93901

Margie Barrios, San Benito County
Board of Supervisors, 1st District
481 Fourth Street, 1st Floor
Hollister, CA 95023

Don Gage, Mayor
City of Gilroy
7351 Rosanna Street
Gilroy, CA 95020

Mike Wasserman, Santa Clara County
Board of Supervisors, 1st District
70 West Hedding Street, 10th Floor
San Jose, CA 95110

Federal Highway Administration
California Division
650 Capitol Mall, Suite 4-100
Sacramento, CA 95814

US Army Corps of Engineers, SF
1455 Market Street
San Francisco, CA 94103

U.S. EPA Region 9
75 Hawthorne Street
Mail Code: WST-8
San Francisco, CA 94105

Regional Director, Ren Lohoefener
United States Fish and Wildlife Service
2800 Cottage Way, Room W-2606
Sacramento, CA 95825

Office of Planning and Research
State Clearinghouse
1400 Tenth Street
Sacramento, CA 95814

California Department of Toxic Substances Control*
P.O. Box 806
Sacramento, CA 95812-0806

State Historic Preservation Officer
Office of Historic Preservation*
1416 Ninth Street #1442
Sacramento, CA 95814

California Department of Parks and Recreation*
Natural Resources Division
P.O. Box 942896
Sacramento, CA 94296

California Department of Water Resources*
Environmental Services Office
P.O. Box 943836
Sacramento, CA 94236

California Department of General Services*
Environmental Services Section
707 Third Street, Fourth Floor
Sacramento, CA 95605

California Department of Resources Recycling and Recovery*
Water Management Division
P.O. Box 4025
Sacramento, CA 95812

California Resources Agency*
1416 Ninth Street, Suite 1311
Sacramento, CA 95814

California Department of Fish and Wildlife*
1416 Ninth Street, 12th Floor
Sacramento, CA 95814

California Highway Patrol*
Office of Special Projects
601 North Seventh Street
Sacramento, CA 95811

California Air Resources Board*
1001 I Street
P.O. Box 100
Sacramento, CA95812

Native American Heritage Commission*
915 Capitol Mall, Room 364
Sacramento, CA 95914

Public Utilities Commission*
505 Van Ness Avenue
San Francisco, CA 94102

California State Water Resources Control Board*
Division of Water Quality
P.O. Box 100 Sacramento, CA 95812

Central Coast Regional Water Quality Control Board*
895 Aerovista Place, Suite 101
San Luis Obispo, CA. 93401-7906

California State Lands Commission*
100 Howe Avenue, Suite 100 South
Sacramento CA 95825-8202

Association of Bay Area Governments
101 Eighth Street
Oakland, CA 94607

California Transportation Commission
1120 N Street, Room 2221, MS-52
Sacramento, CA 95814

California Energy Commission*
1516 Ninth Street
Sacramento, CA 95814

Metropolitan Transportation Commission
101 Eighth Street
Oakland, CA 94607

Planning Office
Santa Clara County
70 W. Hedding Street
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Lani D. Yoshimura
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350 W. Sixth Street
Gilroy, CA 95020

Roads and Airports Department
Santa Clara County
101 Skyport Drive
San Jose, CA 95110

California Department of Conservation*
801 K Street, MS 24-01
Sacramento, CA 95814

Clerk of the Board of Supervisors
County of Santa Clara
70 West Hedding Street
San Jose, CA 95110

Denise R. Thome, Clerk of Board
County Administration Building
481 Fourth Street, 1st Floor
Hollister, CA 95023-3840

Tom Fischer (Chair)
Gilroy Planning Commission
7351 Rosanna Street
Gilroy, CA 95020

Appendix A CEQA Checklist

Supporting documentation of all California Environmental Quality Act (CEQA) checklist determinations is provided in Chapter 2 of this Initial Study/Environmental Assessment (IS/EA). Documentation of "No Impact" determinations is provided at the beginning of Chapter 2. Discussion of all impacts, avoidance, minimization, and/or mitigation measures is under the appropriate topic headings in Chapter 2.

CEQA Environmental Checklist

04-SCL-152	13.8/14.7	1G870
Dist.-Co.-Rte.	P.M/P.M.	E.A.

This checklist identifies physical, biological, social and economic factors that might be affected by the proposed project. In many cases, background studies performed in connection with the projects indicate no impacts. A NO IMPACT answer in the last column reflects this determination. Where there is a need for clarifying discussion, the discussion is included either following the applicable section of the checklist or is within the body of the environmental document itself. The words "significant" and "significance" used throughout the following checklist are related to CEQA, not NEPA, impacts. The questions in this form are intended to encourage the thoughtful assessment of impacts and do not represent thresholds of significance.

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
I. AESTHETICS: Would the project:				
a) Have a substantial adverse effect on a scenic vista	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway	☐	☐	☐	☒
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☒
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
II. AGRICULTURE AND FOREST RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and the forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☐	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☐	☒
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	☐	☐	☐	☒
III. AIR QUALITY: Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:	☐	☐	☐	☒
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☐	☒
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☐	☒
d) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☐	☒
e) Create objectionable odors affecting a substantial number of people?	☐	☐	☐	☒

IV. BIOLOGICAL RESOURCES: Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	☐	☐	☒	☐
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☒	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
V. CULTURAL RESOURCES: Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☐	☐	☒
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☐	☒
d) Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒
VI. GEOLOGY AND SOILS: Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	☐	☐	☐	☒
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☐	☐	☒
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
iv) Landslides?	☐	☐	☐	☒
b) Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☐	☒
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

VII. GREENHOUSE GAS EMISSIONS: Would the project:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

An assessment of the greenhouse gas emissions and climate change is included in the body of environmental document. While Caltrans has included this good faith effort in order to provide the public and decision-makers as much information as possible about the project, it is Caltrans determination that in the absence of further regulatory or scientific information related to GHG emissions and CEQA significance, it is too speculative to make a significance determination regarding the project's direct and indirect impact with respect to climate change. Caltrans does remain firmly committed to implementing measures to help reduce the potential effects of the project. These measures are outlined in the body of the environmental document.

VIII. HAZARDS AND HAZARDOUS MATERIALS: Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☐	☒
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☐	☒
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

IX. HYDROLOGY AND WATER QUALITY: Would the project:

a) Violate any water quality standards or waste discharge requirements?	☐	☐	☐	☒
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	☐	☐	☐	☒
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☐	☐	☒
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒
f) Otherwise substantially degrade water quality?	☐	☐	☐	☒
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j) Inundation by seiche, tsunami, or mudflow	☐	☐	☐	☒

X. LAND USE AND PLANNING: Would the project:

a) Physically divide an established community?	☐	☐	☐	☒
b)Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

XI. MINERAL RESOURCES: Would the project:

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

XII. NOISE: Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	☐	☐	☐	☒
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

XIII. POPULATION AND HOUSING: Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☐	☒
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

XIV. PUBLIC SERVICES:

a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:	☐	☐	☐	☒
Fire protection?	☐	☐	☐	☒
Police protection?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒
XV. RECREATION:				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒
XVI. TRANSPORTATION/TRAFFIC: Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☐	☒
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e) Result in inadequate emergency access?	☐	☐	☐	☒
f) Conflict with adopted policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
XVII. UTILITIES AND SERVICE SYSTEMS: Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☐	☒
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☐	☒
g) Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☐	☒
XVIII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐

	Potentially Significant Impact	Less Than Significant with Mitigation	Less Than Significant Impact	No Impact
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☐	☐	☒
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☐	☒

Appendix B Resources Evaluated Relative to the Requirements of Section 4(f)

This section of the document discusses parks, recreational facilities, wildlife refuges and historic properties found within or next to the project area that do not trigger Section 4(f) protection because either: 1) they are not publicly owned, 2) they are not open to the public, 3) they are not eligible historic properties, 4) the project does not permanently use the property and does not hinder the preservation of the property, or 5) the proximity impacts do not result in constructive use.

While there will be a partial right of way take at the 3665 Pacheco Pass Highway property, the historic boundary of the barn eligible for being listed on the National Register of Historic Places is confined to the footprint of the barn itself and not the parcel as a whole. This boundary was concurred by the SHPO in 1992. As such, there is no property acquired from the historic resource. While the project will impact the parcel the barn is located in, the project is not impacting the historic resource or its defined boundaries, thus not having a use of a section 4(f) resource.

Appendix C Title VI Policy Statement

STATE OF CALIFORNIA—BUSINESS, TRANSPORTATION AND HOUSING AGENCY EDMUND G. BROWN Jr., Governor

DEPARTMENT OF TRANSPORTATION
OFFICE OF THE DIRECTOR
P.O. BOX 942873, MS-49
SACRAMENTO, CA 94273-0001
PHONE (916) 654-5266
FAX (916) 654-6608
TTY 711
www.dot.ca.gov

Flex your power!
Be energy efficient!

March 2013

NON-DISCRIMINATION
POLICY STATEMENT

The California Department of Transportation, under Title VI of the Civil Rights Act of 1964 and related statutes, ensures that no person in the State of California shall, on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, be excluded from participation in, be denied the benefits of, or be otherwise subjected to discrimination under any program or activity it administers.

For information or guidance on how to file a complaint based on the grounds of race, color, national origin, sex, disability, religion, sexual orientation, or age, please visit the following web page: http://www.dot.ca.gov/hq/bep/title_vi/t6_violated.htm.

Additionally, if you need this information in an alternate format, such as in Braille or in a language other than English, please contact the California Department of Transportation, Office of Business and Economic Opportunity, 1823 14th Street, MS-79, Sacramento, CA 95811. Telephone: (916) 324-0449, TTY: 711, or via Fax: (916) 324-1949.

MALCOLM DOUGHERTY
Director

"Caltrans improves mobility across California"

Appendix D Form AD-1006

U.S. Department of Agriculture

FARMLAND CONVERSION IMPACT RATING

PART I *(To be completed by Federal Agency)*	Date Of Land Evaluation Request 1/30/2014
Name of Project SR 152 Shoulder Widening	Federal Agency Involved CA DOT (Assigned by FHWA)
Proposed Land Use Highway Safety Improvement	County and State Santa Clara, California
PART II *(To be completed by NRCS)*	Date Request Received By NRCS 1/30/2014 / Person Completing Form: Ken Oster

Does the site contain Prime, Unique, Statewide or Local Important Farmland? *(If no, the FPPA does not apply - do not complete additional parts of this form)*	YES ✓ NO	Acres Irrigated 22,245	Average Farm Size 281
Major Crop(s) Vegetables,Wine Grapes,Cherries	Farmable Land In Govt. Jurisdiction Acres: 33,302 % 4.0	Amount of Farmland As Defined in FPPA Acres: 4.1 % 33,791	
Name of Land Evaluation System Used CA Revised Storie Index	Name of State or Local Site Assessment System None	Date Land Evaluation Returned by NRCS 2/19/2014	

PART III *(To be completed by Federal Agency)*	Alternative Site Rating Site A	Site B	Site C	Site D
A. Total Acres To Be Converted Directly	2.62			
B. Total Acres To Be Converted Indirectly	0			
C. Total Acres In Site	2.62			
PART IV *(To be completed by NRCS)* Land Evaluation Information				
A. Total Acres Prime And Unique Farmland	1.6			
B. Total Acres Statewide Important or Local Important Farmland	1.02			
C. Percentage Of Farmland in County Or Local Govt. Unit To Be Converted	0.001			
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value	NA			
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value of Farmland To Be Converted (Scale of 0 to 100 Points)	85			

PART VI *(To be completed by Federal Agency)* Site Assessment Criteria *(Criteria are explained in 7 CFR 658.5 b. For Corridor project use form NRCS-CPA-106)*	Maximum Points	Site A	Site B	Site C	Site D
1. Area In Non-urban Use	(15)	14			
2. Perimeter In Non-urban Use	(10)	10			
3. Percent Of Site Being Farmed	(20)	20			
4. Protection Provided By State and Local Government	(20)	20			
5. Distance From Urban Built-up Area	(15)	0			
6. Distance To Urban Support Services	(15)	0			
7. Size Of Present Farm Unit Compared To Average	(10)	0			
8. Creation Of Non-farmable Farmland	(10)	0			
9. Availability Of Farm Support Services	(5)	5			
10. On-Farm Investments	(20)	20			
11. Effects Of Conversion On Farm Support Services	(10)	0			
12. Compatibility With Existing Agricultural Use	(10)	0			
TOTAL SITE ASSESSMENT POINTS	160	89	0	0	0
PART VII *(To be completed by Federal Agency)*					
Relative Value Of Farmland *(From Part V)*	100	85	0	0	0
Total Site Assessment *(From Part VI above or local site assessment)*	160	89	0	0	0
TOTAL POINTS *(Total of above 2 lines)*	260	174	0	0	0

Site Selected: Site A	Date Of Selection 2/21/2014	Was A Local Site Assessment Used? YES ☐ NO ✓

Reason For Selection:

The Corridor Type Assessment was used to calculate the points in Part VI of this form. The points in Part VII totaled 174. Because the nature of this project is intended to improve safety at specific locations on State Route 152, other locations are insufficient.

Name of Federal agency representative completing this form: Caltrans-as-delegated-by-FHWA Date: 2/21/2014

88 *(See Instructions on reverse side)* Form AD-1006 (03-02)

Appendix E Department's Letter to Department of Conservation

NOTIFICATION OF PUBLIC ACQUISITION OF WILLIAMSON ACT LAND

Date of Notification: February 5, 2014
Name of Public Agency: California Department of Transportation (Caltrans)
Address: 111 Grand Ave., Oakland, CA
Contact Person, Title: Eric DeNardo, Environmental Planner
Phone: (510) 286-5645
Fax: (510) 286-5600

TO:
Mark Nechodom, Director
Department of Conservation
c/o Division of Land Resource Protection
801 K Street, MS 18-01
Sacramento, CA 95814

Subject: STATE ROUTE 152 SHOULDER WIDENING PROJECT

Dear Director Nechodom:

1. *What is the total number of acres of Williamson Act contracted land and/or agricultural preserve land being considered for acquisition?*

Caltrans proposes to acquire 2.62 acres of land, which 1.39 acres of land are under Williamson Act contracts for the State Route (SR) 152 Shoulder Widening Project.

Table 1 – Proposed Williamson Act Contracted Parcel Acquisitions

Assessor Parcel Number (APN)	Parcel Size (Acres)	Proposed Acquisition (Acres)
841-50-034	82	.26
841-26-025	26	.17
841-26-023	31	.24
841-26-028	59	.26
841-26-029	57	.08
841-26-013	52	.16
841-41-013	150	.22
Total	**457**	**1.39**

2. *Is the land considered prime or nonprime agricultural land according to Government Code §51201?*

According to the Santa Clara County Office of the Clerk of the Board of Supervisors, the land is considered prime agricultural land. The total number of acres of Williamson Act prime farmland being considered for acquisition is 1.39 acres. There is no proposed acquisition for Williamson act nonprime farmland.

3. *What is the purpose of the acquisition?*

The purpose of the SR 152 Shoulder Widening Project is to address cross-centerline and run-off-the-road accidents along SR 152 from post mile (PM) 13.9 to PM 14.7, east of Gilroy in Santa Clara County. The project would construct standard outside paved 8 foot shoulders on both sides of SR 152, place ground-in rumble strips within newly widened shoulders, install a soft median barrier between the opposing traffic lanes, remove existing drainage ditch beyond the westbound edge of shoulder, and construct a new drainage ditch beyond the new westbound edge of shoulder. The new drainage ditch would allow vehicles that drive off the road into the drainage ditch to safely drive out of the ditch and recover back onto the roadway.

4. *Where is the land located?*

The land proposed to be acquired is located approximately 4 miles from U.S. 101 near Prunedale Avenue, east of the city of Gilroy in Santa Clara County. (Vicinity Map) The proposed Williamson Act contracted land to be acquired is along SR 152, where Caltrans proposes to widen shoulders and relocate existing utility poles. (Location Map)

5. *What are the characteristics of the adjacent land?*

The majority of the adjacent land is agricultural. There is a combination of noncontracted agricultural land, Williamson Act contracted land (prime and nonprime), urban development, and grazing land. Approximately one mile to the east of SR 152, land in the rolling hills is mostly grazing land (Williamson Act nonprime). Continuing westbound along SR 152 there is additional Williamson act prime farmland.

6. *Why was this land identified as necessary for the public improvement?*

This land is necessary because of the nature of the project. It is a safety project along SR 152, where the land is located. Therefore, there are no alternative locations to make the improvements. The location for the improvement was chosen based on accident data. The properties being acquired are in the project area and cannot be avoided.

7. *How does this acquisition meet the findings required under Government Code §51292(a) and 51292(b)?*

The cost of the Williamson Act property being acquired was not a consideration. Portions of several other properties in the same area that are not under a Williamson Act contract are also being acquired. Because of design standards on the length of the required shoulders, Caltrans will need to acquire portions of the parcels. The design standards are based on construction needs and safety requirements, not on cost.

No other locations not under Williamson Act contract are reasonably feasible for the safety improvement project. Other properties in the area include small vineyards (agricultural) and rural residential. However, the project is already acquiring strips of these parcels to build the project. No other parcels in the project area are under Williamson Act contract.

The area needed to construct the project is restricted to very limited boundaries because of the nature of the project. This is a safety project to prevent cross-over and run-off-the-road accidents in a specific area on SR 152. The location and limits of the project are based on accident data. Therefore, no other alternatives are available to acquiring the specified acreage of the Williamson Act contracted parcels.

This project is exempt under Government Code §51293 under section (g) because it is a state highway listed under Section 301 to 622 of the Streets and Highways Code.

8. *Submit a vicinity map and location map.*

Please see attached documents: vicinity map and location map.

9. *Submit a copy of the contract(s) covering the land.*

Contract Numbers 70-151 (APN 841-50-034), 67-020 (APN 841-26-025), 70-053 (APN 841-26-023), 70-061 (APN's 841-26-028 and 841-26-029), and 70-032 (APN's 841-26-013 and 841-41-013) are attached.

10. *Submit copies of all related Environmental Impact Reviews pursuant to the CEQA process.*

A draft initial study is planned to be completed by 08/20/14 and a final initial study is planned to be completed by 2/02/15.

11. *Submit copies of all related Eminent Domain (or in Lieu of Eminent Domain) documents pursuant to Government Code*

Caltrans will attempt to purchase the property in lieu of eminent domain by offering fair market value based on an appraisal. If this is not possible, Caltrans will take the necessary legal steps to purchase the property by eminent domain. The property cannot be purchased until the environmental process is completed.

Notification submitted by:

Eric DeNardo
Environmental Planner
Caltrans District 4
111 Grand Avenue
Oakland, CA 94612

Phone: 510-286-5645
Email: eric.denardo@dot.ca.gov

cc: County of Santa Clara
Office of the Clerk – Board of Supervisors
Attn: Melissa Miller
70 West Hedding Street, 10th Floor, East Wing
San Jose, CA 95110

Appendix F Department of Conservation Letter to the Department

NATURAL RESOURCES AGENCY EDMUND G. BROWN JR., GOVERNOR

DEPARTMENT OF CONSERVATION

Managing California's Working Lands

DIVISION OF LAND RESOURCE PROTECTION

801 K STREET • MS 18-01 • SACRAMENTO, CALIFORNIA 95814

PHONE 916 / 324-0850 • **FAX** 916 / 327-3430 • **TDD** 916 / 324-2555 • **WEB SITE** conservation.ca.gov

March 17, 2014

VIA EMAIL: eric.denardo@dot.ca.gov
Mr. Eric DeNardo, Environmental Planner
Department of Transportation (Caltrans)
District 4
111 Grand Avenue
Oakland, CA 94612

Dear Mr. DeNardo:

PUBLIC ACQUISITION NOTIFICATION FOR STATE ROUTE (SR) 152, SHOULDER WIDENING ROJECT, SANTA CLARA COUNTY

The Department of Conservation's (Department) Division of Land Resource Protection (Division) has reviewed your letter for the referenced project. The Division monitors farmland conversion on a statewide basis and administers the California Land Conservation (Williamson) Act and other agricultural land conservation programs. We offer the following comments and recommendations with respect to the proposed acquisition.

Project Description

The project as proposed is for the acquisition of 1.39 acres of prime agricultural land from seven parcels, noted below, which are under Williamson Act contract to address cross-centerline and run-off-the-road accidents along SR 152. Caltrans will need to acquire portions of the seven parcels, because the design standards require shoulder-widening on the length of the project for safety improvement along the route. Caltrans proposes to relocate existing utility poles along the route of the project.

Table of Proposed Land Conservation Act Parcel Acquisitions

APNs	Parcel Size (Acres)	Proposed Acquisition (Acres)
841-50-034	82	.26
841-26-025	26	.17
841-26-023	31	.24
841-26-028	59	.26
841-26-029	57	.08
841-26-013	52	.16
841-41-013	150	.22
		TOTAL 1.39 ACRES

The Department of Conservation's mission is to balance today's needs with tomorrow's challenges and foster intelligent, sustainable, and efficient use of California's energy, land, and mineral resources.

Project Location

The land proposed to be acquired is located approximately 4 miles from U.S. 101 near Prunedale Avenue, east of the City of Gilroy in Santa Clara County.

Required Findings

With some limited exceptions, the Williamson Act prohibits public agencies from locating public improvements in agricultural preserves, unless the following specific findings are made by the public agency (Government Code §51292.):

(a) The location is not based primarily on a consideration of the lower cost of acquiring land in an agricultural preserve.
(b) If the land is agricultural land covered under a contract pursuant to this chapter for any public improvement, that there is no other land within or outside the preserve on which it is reasonably feasible to locate the public improvement.

Your letter states that there is an urgent need for the road widening project at the chosen site to address accidents at that location which is the basis for determining that no suitable alternative location exists within or outside of the preserve on which it is more reasonably feasible to locate the project. This explanation, in conjunction with the documentation provided in Caltrans' notice, support the findings required under Government Code §51292 (a)(b)).

Eminent Domain

A Williamson Act contract is an enforceable restriction pursuant to Article XIII, §8 of the California Constitution. Public agency acquisition of Williamson Act land must meet the requirements of acquisition by eminent domain or in lieu of eminent domain (e.g., Code of Civil Procedure 1230.010 et seq. and Government Code §7260 et seq.) in order to void the contract pursuant to Government Code §51295. If the contract is not terminated in accordance with the procedures prescribed by the Act, the property remains under contract and its management must be consistent with the terms of the contract.

Potential Future Additional Notification

In accordance with Williamson Act statute, please notify the Department within ten days of when the property is actually acquired (GC §51291, subd. (c)). The Department and Santa Clara County must also be notified of any proposed, significant changes to the project (GC 51291, subdivision (d)). If Caltrans determines not to locate the public improvement on the subject properties, the Department and Santa Clara County must be notified, and the properties will be reenrolled into Williamson Act contracts before returning the land to private ownership.

Thank you for the opportunity to comment on this project. If you have questions on our comments or require technical assistance or information on agricultural land

conservation, please contact Jacquelyn Ramsey, Associate Environmental Planner, at 801 K Street, MS 18-01, Sacramento, California 95814; or, phone (916) 323-2379.

Sincerely,

Molly A. Penberth, Manager
Division of Land Resource Protection
Conservation Support Unit

cc: Santa Clara County Board of Supervisors
Santa Clara Farm Bureau

Appendix G Avoidance, Minimization and/or Mitigation Summary

Environmental Commitments Record for EA 04-1G870_ / ID 0400020620

Last updated 6/17/2015

Route 152-Shoulder widening
SCL-152-13.8/14.7
Current Project Phase: 0,2,9,K

EP: Eric DeNardo 510-286-5645
CL:
RE:

Permits

Permit	Agency	Date Submitted	Date Received	Expiration	Requirements Completed Name	Requirements Completed Date	Comments
2081 - Incidental Take Permit	California Department of Fish & Wildlife						
BO (FWS)	US Fish and Wildlife	7/1/14					

Commitments

Task and Brief Description	Source	SSP/ NSSP	Responsible Staff	Action to Comply	Task Completed Name	Task Completed Date	Remarks/Due Date
PS&E/Before RTL							
Cultural Resources							
Establishment of Environmentally Sensitive Area (ESA) in plans, specifications, and estimates	SSP	SSP	Cultural, PM, PE	All responsible parties will review the PS&E package and ensure that standard special provisions for the ESA are included in the PS&E			
Pre-Construction							
Biology							
A biologist will conduct pre-construction surveys for pallid bat in the project vicinity. If any maternity roosts of special-status bats are discovered in the project vicinity, these areas will be identified as environmentally sensitive areas and appropriate buffers and work windows will be applied during project construction.	NES	SSP	Biology/RE				
Preconstruction surveys will be conducted by a qualified biological monitor immediately before beginning any ground-disturbing activities and vegetation clearing that may result in take of CTS and/or CRLF as determined by USFWS. All suitable aquatic and upland habitats will be thoroughly inspected.	BO	SSP	Biology/RE				
To ensure that no Least Bells Vireo are in the project vicinity or nesting close enough to it to be disturbed by construction activities, preconstruction surveys for LBV will be conducted by a qualified biological monitor, knowledgeable about LBV,	NES	SSP	Biology/RE				

Environmental Commitments Record for EA 04-1G870_ / ID 0400020620

Last updated 6/17/2015

Route 152-Shoulder widening

SCL-152-13.8/14.7

Current Project Phase: 0,2,9,K

EP: Eric DeNardo 510-286-5645

CL:

RE:

Task and Brief Description	Source	SSP/ NSSP	Responsible Staff	Action to Comply	Task Completed Name	Task Completed Date	Remarks/Due Date
inside the proposed project footprint no more than 2 weeks before construction begins, for construction activities occurring during the breeding season. If work is suspended for more than 15 days during the breeding season, surveys will be conducted again before construction recommences.							
Cultural Resources							
Field Review for ESA fencing	SSP	SSP	Cultural, ECL, RE, Contractor	All responsible parties perform field review of the ESA location at least one calendar week prior to construction activities			
Construction							
Biology							
A qualified biological monitor will be present during all activities that may result in the take of listed species. Following the completion of the vegetation clearing and initial ground disturbance, the monitor will either continue to be present on a daily basis or Caltrans will transfer the compliance responsibility to a qualified construction inspector.	BO	SSP	Biology/RE/ Contractor				
All work for the proposed project will be scheduled to occur between June 1 and October 15, to avoid effects on species active during the wet weather months, when amphibian species are most active.	BO	SSP	Biology, Contractor, RE				
Before beginning construction, a qualified biologist will conduct an employee training session with all construction personnel that will include the biology and ecology of sensitive species and habitats with the potential to occur in or near the BSA.	NES	SSP	Biology/RE				
Before construction activities begin, the contractor will clearly delineate environmentally sensitive areas (ESAs) with Wildlife Exclusion Fencing (WEF) in accordance with permit requirements. The WEF will serve to exclude CTS and CRLF from construction areas and exclude construction personnel from ESAs. WEF will be installed along the perimeter of all ESAs, will remain in place throughout the duration of construction, and will be inspected regularly and fully maintained. Repairs to the WEF will be made within 24 hours of discovery. After construction is completed, the WEF will	BO	SSP	Contractor/Biology/RE				

Environmental Commitments Record for EA 04-1G870_ / ID 0400020620

Last updated 6/22/2015

Route 152-Shoulder widening

SCL-152-13.8/14.7

Current Project Phase: 0,2,9,K

EP: Eric DeNardo 510-286-5645

CL:

RE:

Task and Brief Description	Source	SSP/ NSSP	Responsible Staff	Action to Comply	Task Completed Name	Task Completed Date	Remarks/Due Date
be completely removed. This measure is required to reduce CEQA significant impacts to CTS.							
Construction site management practices will be implemented to avoid or minimize effects on listed species and their habitats. These include: a speed limit of 15 miles per hour, designated construction staging and storage areas will be located outside ESA's, trash be disposed of off-site, a firearm restriction, and all equipment will be properly maintained and free of leaks.	BO	SSP	Contractor, RE, Biology				
In compliance with the requirements of the Central Coast Regional Water Quality Control Board, a storm water pollution prevention plan (SWPPP) and erosion control BMPs will be developed and implemented to minimize any wind- or water-related material discharges. The SWPPP will provide guidance for measures to protect environmentally sensitive areas and to prevent and minimize stormwater and non-stormwater discharges.	NES		RE/Biology				
Pre-construction surveys will be completed if construction activities occur during the breeding season (February 1 through August 1). No disturbance will occur within approximately 164 feet (50 meters) of occupied BUOW burrows during non-breeding periods (October 16 through March 31), or within approximately 656 feet (200 meters) during the breeding/fledging period (April 1 through October 15). If construction activities occur within these limits while burrows are active, a site-specific work plan will be prepared and construction will take place only in the presence of the biological monitor.	NES	SSP	Biology/RE				
The Department's standard Best Management Practices would be followed to limit the spread of invasive species in the BSA. This includes daily inspection of equipment, watering down equipment at the end of each working day, and using non-invasive types of species for erosion control. In the event that noxious weeds are disturbed or removed during construction-related activities, the contractor will contain the plant material associated with these noxious weeds and dispose of it in a manner that will not promote the spread of the species.	BO	n/a	Contractor/RE/ Biology				
The nesting season for migratory birds is anticipated to occur between February 1 and August 31. If occupied nests—nests with birds or eggs—are observed to be present within	BO	SSP	Contractor/Biology/RE				

Environmental Commitments Record for EA 04-1G870_ / ID 0400020620

Last updated 6/22/2015

Route 152-Shoulder widening

SCL-152-13.8/14.7

Current Project Phase: 0,2,9,K

EP: Eric DeNardo 510-286-5645

CL:

RE:

Task and Brief Description	Source	SSP/ NSSP	Responsible Staff	Action to Comply	Task Completed Name	Task Completed Date	Remarks/Due Date
or adjacent to the BSA, the approved biological monitor will notify the Resident Engineer to stop work and notify the Department biologist. No work buffers would be established (within 100 feet of a passerine bird nest or within 300 feet of a raptor nest) and USFWS and CDFW will be notified.							
To prevent inadvertent entrapment of CLRF, CTS, SJKF, and/or other animals during construction, all excavated holes or trenches more than 2 feet deep will be covered with plywood or similar materials at the end of each working day, or the holes or trenches will contain one or more escape ramps, constructed of earth fill or wooden planks. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. If a trapped CLRF (or other wildlife) is discovered at any time, USFWS will be contacted for guidance. USFWS will be notified within 1 working day by telephone and e-mail.	BO	SSP	RE/Biology/ Contractor				
Cultural Resources							
Contractor will install Temporary Fencing (Type ESA) along the boundary of the Temporary Construction Easement (TCE) proposed for construction staging located at the northwest end of the 3665 Pacheco Pass Highway (approximate PM 14.6 through end of project at 14.7). The Temporary Fence will continue east along the Caltrans ROW to the edge of the property owners driveway entrance (approximate PM 14.711). Note that ESA barriers shall not block the access drive located immediately north of State Route 152 used by the property owners at 3665 Pacheco Pass Highway, and will surround the entirety of the staging area to prevent contact between construction equipment and the area containing the historic barn. The fencing will be installed at least one calendar week prior to initiating any work in those areas. The Caltrans architectural historian will be present to monitor fence installation.	NES	SSP	Cultural, RE, Contractor				
If previously unidentified cultural materials are unearthed during construction, it is Caltrans' policy that work be halted in that area until a qualified archaeologist can assess the significance of the find. Additional archaeological survey will be needed if project limits are extended beyond the present survey limits.	Env Doc						

Environmental Commitments Record for EA 04-1G870_ / ID 0400020620

Last updated 6/22/2015

Route 152-Shoulder widening

SCL-152-13.8/14.7

Current Project Phase: 0,2,9,K

EP: Eric DeNardo 510-286-5645

CL:

RE:

Task and Brief Description	Source	SSP/ NSSP	Responsible Staff	Action to Comply	Task Completed Name	Task Completed Date	Remarks/Due Date
Visual Resources							
Flood lighting for night work should be placed and adjusted such that light is cast downward and confined to the immediate work area. Lights should be shielded to prevent stray light.	VIA	SSP	Contractor, RE				
Post-Construction							
Biology							
All slopes or unpaved areas affected by the proposed action will be restored to natural conditions. Where disturbance includes the removal of trees or plants, native species will be replanted and maintained until they become established.	BO	SSP	Biology, RE, Contractor				

Appendix H USFWS Species List

U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office

Federal Endangered and Threatened Species that Occur in or may be Affected by Projects in the Counties and/or U.S.G.S. 7 1/2 Minute Quads you requested

Document Number: 150121010943

Current as of: January 21, 2015

Quad Lists

Listed Species

Invertebrates

Euphydryas editha bayensis
- bay checkerspot butterfly (T)
- Critical habitat, bay checkerspot butterfly (X)

Fish

Hypomesus transpacificus
- delta smelt (T)

Oncorhynchus mykiss
- Central Valley steelhead (T) (NMFS)
- South Central California steelhead (T) (NMFS)

Oncorhynchus tshawytscha
- Central Valley spring-run chinook salmon (T) (NMFS)
- winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense
- California tiger salamander, central population (T)
- Critical habitat, CA tiger salamander, central population (X)

Rana draytonii
- California red-legged frog (T)
- Critical habitat, California red-legged frog (X)

Birds

Brachyramphus marmoratus
- marbled murrelet (T)

Sternula antillarum (=Sterna, =albifrons) browni
- California least tern (E)

Vireo bellii pusillus
- Least Bell's vireo (E)

Mammals

Vulpes macrotis mutica
- San Joaquin kit fox (E)

Plants

Dudleya setchellii
- Santa Clara Valley dudleya (E)

Streptanthus albidus ssp. albidus
- Metcalf Canyon jewelflower (E)

Quads Containing Listed, Proposed or Candidate Species:

THREE SISTERS (385A)
SAN FELIPE (385B)
CHITTENDEN (386A)
GILROY HOT SPRINGS (405C)
PACHECO PEAK (405D)
GILROY (406D)

County Lists

Santa Clara County

Listed Species

Invertebrates

Branchinecta conservatio
Conservancy fairy shrimp (E)

Branchinecta lynchi
vernal pool fairy shrimp (T)

Desmocerus californicus dimorphus
valley elderberry longhorn beetle (T)

Euphydryas editha bayensis
bay checkerspot butterfly (T)
Critical habitat, bay checkerspot butterfly (X)

Incisalia mossii bayensis
San Bruno elfin butterfly (E)

Lepidurus packardi
Critical habitat, vernal pool tadpole shrimp (X)
vernal pool tadpole shrimp (E)

Fish

Acipenser medirostris
green sturgeon (T) (NMFS)

Eucyclogobius newberryi
tidewater goby (E)

Hypomesus transpacificus
delta smelt (T)

Oncorhynchus kisutch
coho salmon - central CA coast (E) (NMFS)
Critical habitat, coho salmon - central CA coast (X) (NMFS)

Oncorhynchus mykiss
Central California Coastal steelhead (T) (NMFS)
Central Valley steelhead (T) (NMFS)

Critical habitat, Central California coastal steelhead (X) (NMFS)
South Central California steelhead (T) (NMFS)

Oncorhynchus tshawytscha
Central Valley spring-run chinook salmon (T) (NMFS)
winter-run chinook salmon, Sacramento River (E) (NMFS)

Amphibians

Ambystoma californiense
California tiger salamander, central population (T)
Critical habitat, CA tiger salamander, central population (X)

Rana draytonii
California red-legged frog (T)
Critical habitat, California red-legged frog (X)

Reptiles

Gambelia (=Crotaphytus) sila
blunt-nosed leopard lizard (E)

Masticophis lateralis euryxanthus
Alameda whipsnake [=striped racer] (T)
Critical habitat, Alameda whipsnake (X)

Thamnophis gigas
giant garter snake (T)

Thamnophis sirtalis tetrataenia
San Francisco garter snake (E)

Birds

Brachyramphus marmoratus
Critical habitat, marbled murrelet (X)
marbled murrelet (T)

Charadrius alexandrinus nivosus
western snowy plover (T)

Coccyzus americanus occidentalis
Western yellow-billed cuckoo (T)

Pelecanus occidentalis californicus
California brown pelican (E)

Rallus longirostris obsoletus
California clapper rail (E)

Sternula antillarum (=Sterna, =albifrons) browni

California least tern (E)

Vireo bellii pusillus
Least Bell's vireo (E)

Mammals

Reithrodontomys raviventris
salt marsh harvest mouse (E)

Vulpes macrotis mutica
San Joaquin kit fox (E)

Plants

Acanthomintha duttonii
San Mateo thornmint (E)

Castilleja affinis ssp. neglecta
Tiburon paintbrush (E)

Ceanothus ferrisae
Coyote ceanothus (E)

Chorizanthe robusta var. robusta
robust spineflower (E)

Cirsium fontinale var. fontinale
fountain thistle (E)

Dudleya setchellii
Santa Clara Valley dudleya (E)

Eriophyllum latilobum
San Mateo woolly sunflower (E)

Hesperolinon congestum
Marin dwarf-flax (=western flax) (T)

Holocarpha macradenia
Critical habitat, Santa Cruz tarplant (X)
Santa Cruz tarplant (T)

Lasthenia conjugens
Contra Costa goldfields (E)
Critical habitat, Contra Costa goldfields (X)

Streptanthus albidus ssp. albidus
Metcalf Canyon jewelflower (E)

Suaeda californica
California sea blite (E)

Trifolium amoenum
showy Indian clover (E)

Proposed Species

Amphibians

Rana draytonii
Critical habitat, California red-legged frog (PX)

Key:

(E) *Endangered* - Listed as being in danger of extinction.
(T) *Threatened* - Listed as likely to become endangered within the foreseeable future.
(P) *Proposed* - Officially proposed in the Federal Register for listing as endangered or threatened.
(NMFS) Species under the Jurisdiction of the National Oceanic & Atmospheric Administration Fisheries Service. Consult with them directly about these species.
Critical Habitat - Area essential to the conservation of a species.
(PX) *Proposed Critical Habitat* - The species is already listed. Critical habitat is being proposed for it.
(C) *Candidate* - Candidate to become a proposed species.
(V) Vacated by a court order. Not currently in effect. Being reviewed by the Service.
(X) *Critical Habitat* designated for this species

Appendix I USFWS Biological Opinion

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Suite W-2605
Sacramento, California 95825-1846

In Reply Refer to:
08ESMF00-
2014-F-0553-1

JUN 18 2015

Ms. Melanie Brent, Office Chief
Caltrans District 4 Environmental Analysis
California Department of Transportation
P.O. Box 23660
Oakland, California 94623-0660

Subject: Formal Consultation on the State Route 152 Shoulder Repair Project, Santa Clara County, California (Caltrans EA 1G870)

Dear Ms. Brent:

This letter is in response to the California Department of Transportation's (Caltrans), July 3, 2014, request for initiation of formal consultation with the U.S. Fish and Wildlife Service (Service) on the proposed State Route 152 (SR-152) Shoulder Repair Project (Caltrans EA 1G870), Santa Clara County, California. Your request was received by the Service on July 21, 2014. At issue are the proposed project's effects on the federally threatened California red-legged frog (*Rana draytonii*), threatened Central California Distinct Population Segment of the California tiger salamander (Central California tiger salamander) (*Ambystoma californiense*), endangered San Joaquin kit fox (*Vulpes macrotis mutica*), and endangered least Bell's vireo (*Vireo bellii pusillus*). This response is provided under the authority of the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act), and in accordance with the implementing regulations pertaining to interagency cooperation (50 CFR 402).

The Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) legislation (23 U.S.C. 327) allows the Secretary of the U.S. Department of Transportation acting through the Federal Highway Administration (FHWA) to establish a Surface Transportation Project Delivery Pilot Program, whereby a State may assume the FHWA responsibilities under the National Environmental Policy Act (NEPA) for environmental review, agency consultation and other action pertaining to the review or approval of a specific project. Caltrans assumed these responsibilities for the FHWA on July 1, 2007 through a Memorandum of Understanding (MOU) within the State of California (http://www.dot.ca.gov/ser/downloads/MOUs/nepa_delegation/sec6005mou.pdf).

The federal action we are consulting on is the shoulder widening of SR-152 to improve safety by reducing the number of cross-centerline and run-off-the-road accidents along the SR-152 corridor, and provide standard 8-foot-wide shoulders between post mile (PM) 13.8 and PM 14.7. Pursuant to 50 CFR 402.12(j), you submitted a biological assessment dated July 2014 for our review and requested concurrence with the findings presented therein. These findings conclude that the proposed project may affect, and is likely to adversely affect the California red-legged frog and Central California tiger salamander, and is not likely to adversely affect the San Joaquin kit fox and

least Bell's vireo. Critical habitat has been designated for the California red-legged frog, Central California tiger salamander, and least Bell's vireo; however, the proposed action does not occur within designated critical habitat for these species.

In considering your request, we based our evaluation on the following: (1) the State Route 152 Shoulder Widening Project, Biological Assessment dated July 2014; (2) the February 6, 2014, site visit; (3) the Santa Clara Valley Habitat Plan; (4) miscellaneous correspondence and electronic mail concerning the proposed action between Caltrans and the Service; and (5) other information available to the Service.

The Service attended a site visit with Caltrans on February 6, 2014, to review the project and discuss components of the project that could result in take of listed species or affect species habitat. The project is located within the Santa Clara Valley Habitat Plan (Plan) coverage area. Based on the Santa Clara Valley Habitat Agency Geobrowser, the project is not located within a wildlife survey area for the San Joaquin kit fox; therefore, no additional measures or compensation is required for this species. The Service concurs that the project is not likely to adversely affect the San Joaquin kit fox. The project is located within the Plan's mapped habitat for the least Bell's vireo within the portion of the action area supporting Willow Riparian Forest and Scrub land cover type near the northern project terminus. However, the habitat within this land cover type and within 250 feet of the action area contains no riparian trees or shrubs and entirely lacks the structural diverse canopy and dense shrub cover, typically early successional, dominated by cottonwood/willow, oak woodland, and mulefat scrub required by this species. This reach of San Ysidro Creek is characterized by low growing herbaceous weedy vegetation and grasses absent of any potential nesting habitat. For these reasons, the project will not likely adversely affect the least Bell's vireo and the preconstruction surveys, avoidance and minimization measures, and construction monitoring outlined under Condition 16 in Section 6.6 and Table 6.8 of the Plan to avoid injury or mortality to least Bell's vireos and their nests is not warranted.

The remainder of this document provides our biological opinion on the effects of the proposed project on California red-legged frog and Central California tiger salamander.

Consultation History

February 6, 2014	The Service attended a site visit with Caltrans to discuss the proposed project and potential project effects on listed species and determine what areas posed risks based on on-site habitat suitability.
July 21, 2014	The Service received a letter requesting the initiation of formal consultation dated July 1, 2014, and a Biological Assessment for the SR-152 Shoulder Widening Project.
December 18, 2013 - June 10, 2015	Electronic and phone correspondence between Caltrans and the Service.

Description of the Action

The following project description, inclusive of the proposed compensation and proposed conservation measures, was provided by Caltrans and is an excerpt from the July 2014 Biological Assessment, as revised, with minor modifications for reasons of clarity and accuracy provided by the Service.

Project Description

The purpose of the proposed project is to improve vehicle safety by constructing a soft median barrier, shoulder rumble strips, standard 8-foot shoulders, and recoverable drainage ditch along the westbound shoulder. The project extends 0.9-mile along SR-152 from PM 13.8 to PM 14.64.

Shoulder Widening and Rumble Strip Installation

Shoulder widening would require excavation and fill to develop a new surface for expanding the shoulder. The existing pavement would be saw-cut and the new pavement would be expanded outward from the cut area. The equipment required for this work would include a blade, backhoe, paver, roller, and spreader. Vehicles required would include a truck for materials, a labor pickup truck, and a water truck. Along the project limits, the following activities are recommended to improve the safety of the corridor:

1. Widen shoulders to a standard 8 feet along both sides of the travel ways.
    - From Station (Sta) 10+00 to Sta 37+07 and Sta 44+70 to Sta 64+10
    - Between Sta 37+07 and Sta 44+70, the shoulders are already standard; this area will not be widened.
2. Install rumble strips on both sides of the edge of travel ways.
    - Eastbound: from Sta 10+00 to Sta 64+10
    - Westbound: from Sta 10+00 to Sta 36+00 and Sta 38+08 to Sta 64+10
3. Install soft barrier at the centerline alignment.
    - From Sta 10+00 to Sta 36+50 and Sta 38+08 to Sta 64+10
4. Relocate existing utility poles outside the Clear Recovery Zone (CRZ) within the Caltrans right-of-way (ROW).
    - Eastbound: 21 feet from edge of travel ways
5. Remove existing metal beam guardrail along the project limit and install new standard Midwestern guardrail system within the project limits where needed.

The shoulder would be widened to a standard 8-foot width. Shoulder widening would occur along both sides of the travel ways in the following locations:

- Sta 10+00 to Sta 37+07
- Sta 44+70 to Sta 64+10

Rolled-in shoulder rumble strips would be added to the shoulders at the edge of the road. The equipment required for this work would include a paver, a roller, and a spreader. Rumble strips would be installed on both sides of the edge of the roadway at the following locations:

- Eastbound: Sta 10+00 to Sta 64+10
- Westbound: Sta 10+00 to Sta 36+00
- Westbound: Sta 38+08 to Sta 64+10

Within the proposed project footprint, the following construction methods would be used:

1. To alert oncoming drivers of construction activities, portable changeable message signs (CMS) would be placed beyond the proposed project footprint in previously disturbed areas along SR-152 roadside.

2. To protect workers within the narrow roadway and shoulder, k-rail would be placed as a barrier within the project limits on the existing paved surface.

3. To minimize ground-disturbing effects and reduce the likelihood of species traveling into the construction site, wildlife exclusion fencing (WEF) would be installed, offset 5 feet from the extent of clearing and grubbing.

4. The work area would be cleared and grubbed before the start of paving and the excavation activities.

5. The existing shoulder would be grinded, graded, and repaved to a standard width of 8 feet.

6. Pavement grindings would be hauled to an approved off-site location.

7. The new drainage ditch would be excavated and graded to a 4:1 slope, with excavation depths of approximately 2-5 feet.

8. Culvert work and extensions would require a concrete dump truck. The truck would need a 12 to 15-foot clearance from k-rail to culvert.

On-site equipment may include excavators, compactors, loaders, scrapers, rollers, pavement grinders, oil trucks, paving machines, dump trucks, and concrete trucks. All work would be performed at night to minimize effects on this heavy traffic route. All vehicle staging would occur within the proposed project footprint. The proposed action is estimated to require 3 to 4 months to complete.

Drainage Repairs

Within the project limits, several drainage repairs and relocations would occur. The existing unlined drainage ditch along the westbound side of SR-152 would be removed and replaced approximately 11 feet from the edge of the roadway. The new drainage ditch would have recoverable slopes and would be wider, to allow vehicles that run off the main line-drive back onto the roadway. Repairs to the drainage culverts would include adding, extending, cleaning, or replacing concrete box culverts and pipes. Specific drainage improvements would include:

1. Installing a new 36-inch corrugated metal pipe (CMP) cross drain at Sta 19+00;

2. Closing the opening between an existing 6-foot by 3-foot reinforced concrete box (RCB), crossing SR-152 at the Prunedale intersection, and an existing longitudinal 6-foot by 3-foot RCB by extending both RCBs;

3. Extending an existing longitudinal 6-foot by 3-foot RCB on the east end to meet the extending existing 42-inch CMP arch pipe, crossing SR-152 at a newly constructed T-shaped concrete structure; and

4. Moving/replacing existing drainage ditch (westbound side) to the north, 2 feet to 5 feet deep and 15 feet to 33 feet wide.

Culvert Cleaning

Two existing drainage culverts within the project limits would need to be cleaned. One is a 6-foot by 3-foot RCB located in an unpaved area along the highway, eastbound and a few feet outside the roadway shoulder between Sta 39+00 and Sta 45+50. The inside of this RCB has been filled with excessive debris and dirt, and its capacity has been reduced substantially. The estimated amount of debris and dirt to be removed is approximately 190 cubic yards.

The culvert to be cleaned is a 42-inch by 29-inch corrugated steel pipe arch culvert. This is a cross culvert located at Sta 49+05. This arch culvert is filled with debris and dirt over half of its capacity. The estimated amount of debris and dirt inside this arch culvert is approximately 10 cubic yards. Including the debris and dirt accumulated in the open channel area at both outlets of the RCB and the cross arch culverts, the estimated amount of debris and dirt to be removed is approximately 220 cubic yards.

Debris removal would require the use of a remote controlled mini front loader and/or a vactor truck. The vactor truck requires the use of water to remove dirt and debris. All removed materials would require testing to meet certain criteria before being disposed outside the highway ROW. The requirements and criteria for material testing would be determined by the Office of Water Quality Control, while the control of water to be used during culvert cleaning would be determined by the Office of Biological Sciences and Permits and Office of Water Quality Control. The onsite biological monitor can also advise on the control of water to be used during culvert cleaning.

Other Actions

A soft barrier of rolled-in ruble strips would be installed at the centerline at the following locations:

- Sta 10+00 to Sta 36+50
- Sta 38+08 to Sta 64+10

Equipment Staging

Equipment staging would occur at the southwestern limits of the proposed project footprint, within an approximately 0.37-acre area east of Prunedale Avenue along the westbound shoulder. The staging area would be fenced using high-visibility WEF.

Relocation of Utilities

Utility poles would be relocated outside the 20-foot CRZ – an area clear of fixed objects that would provide a clear zone for vehicles leaving the traveled way to recover – and within the Caltrans ROW. The poles would be relocated approximately 31 feet from the edge of the travel way on the eastbound side and approximately 1 foot from the proposed temporary construction easement and existing Caltrans ROW on the westbound side of SR-152.

<u>Construction Actions</u>

Site Preparation

Site preparation activities would include installation of CMS, installation of WEG and vegetation removal.

Equipment Staging and Laydown

All construction activities would occur within the existing Caltrans ROW and within the temporary construction easement. All equipment staging and materials stockpiling for the project would be restricted to the designated staging area. The proposed staging area would measure approximately 400 feet by 40 feet (0.37-acre) and would be located in the northeastern extent of the action area. Most of this area has been previously disturbed and consists of pavement, gravel, and upland ruderal/agricultural vegetation.

Access Roads

No access roads outside of the action area would be required.

Sequence of Construction Actions

Caltrans anticipates that construction would occur between June 1, 2016, and October 15, 2016, and would be completed in approximately 120 days. A dry season work window would be established to minimize ground disturbance outside of the amphibian breeding season. Generally, construction work would occur in the following order:

1. Install wildlife exclusion fencing
2. Setup temporary k-rail barriers
3. Clear and grub
4. Relocate utilities
5. Excavate roadway and ditch
6. Extend culvert
7. Construct shoulder
8. Repave traveled way and improve roadway
9. Remove temporary k-rail
10. Install erosion control measures
11. Delineate roadway

Site Cleanup and Restoration

All construction-related materials, including fencing, would be removed after construction activities are completed. The temporarily disturbed areas would be restored, recontoured to original grade where feasible, and protected by implementation of erosion control measures. Permanent erosion control, including soil stabilization measures (such as tackified mulch and coir netting), would be applied to all bare ground temporarily affected to minimize erosion after construction.

Proposed Conservation Measures

General Conservation Measures

To reduce potential effects to sensitive biological resources, Caltrans proposes to incorporate construction best management practice (BMP) and avoidance and minimization measures into the proposed roadway construction project. These measures will be communicated to the contractor through the use of special provisions included in the contract bid solicitation package. These measures include the following:

1. **Seasonal Avoidance**. Construction actions will be scheduled to minimize effects on listed species and habitats. Except for limited vegetation clearing necessary to minimize effects to

nesting birds, all ground-disturbing activities in species habitat will be conducted between June 1 and October 15.

2. **Environmental Awareness Training**. Prior to the start of construction, a qualified biologist will conduct an educational training program for all construction personnel including contractors and subcontractors. The training will include, at a minimum, a description of the California red-legged frog, Central California tiger salamander, and their habitat within the action area; an explanation of the status of these species and protection under state and federal laws; the avoidance and minimization measures to be implemented to reduce take of these species; communication and work stoppage procedures in case a listed species is observed within the action area; and an explanation of the Environmentally Sensitive Areas (ESAs) and WEF and the importance of maintaining these structures. An informational brochure conveying this information with images of these species to aid in identification will be prepared and distributed to all construction personnel. Upon completion of the program, personnel will sign a form stating that they attended the program and understand all the avoidance and minimization measures and implications of the Act.

3. **Environmentally Sensitive Areas**. Prior to the start of construction all ESAs – defined as areas containing sensitive habitats adjacent to or within construction work areas for which physical disturbance is not allowed – will be clearly delineated using high visibility orange fencing. Construction work areas include the active construction site and all areas providing support for the proposed action including areas used for vehicle parking, equipment and material storage and staging, access roads, etc. The ESA fencing will remain in place throughout the duration of the proposed action, while construction activities are ongoing, and will be regularly inspected and fully maintained at all times. The final project plans will depict all locations where ESA fencing will be installed and will provide installation specifications. The bid solicitation package special provisions will clearly describe acceptable fencing material and prohibited construction-related activities including vehicle operation, material and equipment storage, access roads and other surface-disturbing activities within ESAs.

4. **Culvert Cleaning**. Before any cleaning activities, all culverts in the action area will be inspected for the presence of listed species by a Service-approved biologist.

5. **Predesignated Staging Areas**. All material stockpiling, vehicle parking, and equipment staging areas for the proposed action will be permitted only in areas cleared by a Service-approved biologist. The limits of the designated staging area will be clearly marked before beginning construction. Staging areas will be located within the Caltrans ROW in non-sensitive locations at designated disturbed/developed areas outside construction zones. No staging will be allowed outside the predesignated staging areas. No equipment storage or staging may occur in or adjacent to designated critical habitat areas before the establishment of an environmentally sensitive area.

6. **Weather Restrictions**. The Service-approved biologist will observe 48-hour weather forecasts and will notify the resident engineer of the potential of any storm events. No work will occur during or within 24 hours after a rain event exceeding 0.2-inch, as measured by the NOAA Weather Report for Gilroy (C4787). Service approval to continue work during or within 24 hours of a rain event will be considered on a case-by-case basis.

7. **Avoidance of Entrapment**. To prevent inadvertent entrapment of animals during construction, all excavated, steep-walled holes or trenches more than one foot deep will be covered with plywood or similar materials at the close of each working day or provided with one or more escape ramps constructed of earth fill or wooden planks. The Service-approved biologist shall inspect all holes and trenches at the beginning of each workday and before such holes or trenches are filled. All replacement pipes, culverts, or similar structures stored in the action area overnight will be inspected before they are subsequently moved, capped, and/or buried. If at any time a listed species is discovered, the Resident Engineer and Service-approved biologist will be notified immediately and the Service-approved biologist shall implement the species observation and handling protocol outlined below.

8. **Best Management Practices**. Storm Water Pollution Prevention Plans (SWPPP) and erosion control BMP will be developed and implemented to minimize any wind or water-related erosion and will be in compliance with the requirements of the Regional Water Quality Control Board. The SWPPP will reference the Caltrans Construction Site BMP Manual. This manual is comprehensive and includes many other protective measures and guidance to prevent and minimize pollutant discharges and can be found online at: http://www.dot.ca.gov/hq/construc/stormwater/manuals.htm. Protective measures will include, at a minimum:

    a. No discharge of pollutants from vehicle and equipment cleaning is allowed into any storm drains or watercourses.

    b. Vehicle and equipment fueling and maintenance operations must be at least 50 feet away from watercourses, except at established commercial gas stations or established vehicle maintenance facility.

    c. Concrete wastes are collected in washouts and water from curing operations is collected and disposed. Neither will be allowed into watercourses.

    d. Spill containment kits will be maintained onsite at all times during construction operations and/or staging or fueling of equipment.

    e. Dust control measures will include use of water trucks and dust palliatives to control dust in excavation-and-fill areas, covering temporary access road entrances and exits with rock (rocking), and covering of temporary stockpiles when weather conditions require.

    f. Coir rolls or straw wattles that do not contain plastic or synthetic monofilament netting will be installed along or at the base of slopes during construction to capture sediment.

    g. Protection of graded areas from erosion using a combination of silt fences, fiber rolls, etc. along toes of slopes or along edges of designated staging areas, and erosion control netting (such as jute or coir) as appropriate on sloped areas. Erosion control materials that use plastic or synthetic monofilament netting will not be used within the action area. This includes products that use photodegradable or biodegradable synthetic netting, which can take several months to decompose. Acceptable materials include natural fibers such as jute, coconut, twine or other similar fibers.

h. Permanent erosion control measures such as bio-filtration strips and swales to receive storm water discharges from the highway, or other impervious surfaces will be incorporated to the maximum extent practicable.

i. All grindings and asphaltic-concrete waste will be stored within previously disturbed areas absent of habitat and at a minimum of 50 feet from any aquatic habitat, culvert, or drainage feature.

9. **Construction Site Management Practices**. The following site restrictions will be implemented to avoid or minimize effects on listed species and their habitats:

a. A speed limit of 15 miles per hour (mph) in the project footprint in unpaved areas will be enforced to reduce dust and excessive soil disturbance.

b. Construction access, staging, storage, and parking areas, will be located within the project Caltrans ROW outside of any designated ESA or outside of the Caltrans ROW in areas environmentally cleared by the contractor. Access routes and the number and size of staging and work areas will be limited to the minimum necessary to construct the proposed project. Routes and boundaries of roadwork will be clearly marked prior to initiating construction or grading.

c. To the maximum extent practicable, any borrow material will be certified to be non-toxic and weed free.

d. All food and food-related trash items will be enclosed in sealed trash containers and properly disposed of off-site.

e. No pets from project personnel will be allowed anywhere in the action area during construction.

f. No firearms will be allowed on the project site except for those carried by authorized security personnel, or local, State or Federal law enforcement officials.

g. A Spill Response Plan will be prepared. Hazardous materials such as fuels, oils, solvents, etc. will be stored in sealable containers in a designated location that is at least 50 feet from hydrologic features.

h. All equipment will be properly maintained and free of leaks. Servicing of vehicles and construction equipment including fueling, cleaning, and maintenance will occur at least 50 feet from any hydrologic features.

10. **Vegetation Removal**. Any vegetation that is within the cut and fill line or growing in locations where temporary or permanent structures will be placed (e.g., shoulder widening, staging or access areas) will be cleared. Vegetation will be cleared only where necessary and will be cut above soil level except in areas that will be excavated for roadway construction. This will allow plants that reproduce vegetatively to resprout after construction. All clearing and grubbing of woody vegetation will occur by hand or using light construction equipment such as backhoes. If clearing and grubbing occurs between February 1 and August 31, a qualified biologist(s) will survey for nesting birds within the area(s) to be disturbed including a perimeter buffer of 100 feet for passerines and 300 feet for raptors before clearing activities begin. All nest avoidance requirements of the Migratory Bird Treaty Act and California Fish and Game Code Sections 3503 and 3503.5 will be observed. All cleared

vegetation will be removed from the project footprint to prevent attracting animals to the project site. The contractor will be responsible for obtaining all permits, licenses, and environmental clearances for properly disposing of such materials. A Service-approved biologist will be present during all vegetation clearing and grubbing activities. Prior to vegetation removal, the Service-approved biologist shall thoroughly survey the area for California red-legged frogs or Central California tiger salamanders. Once the Service-approved biologist has thoroughly surveyed the area, clearing and grubbing may continue without further restrictions on equipment; however, the Service-approved biologist shall remain onsite to monitor for California red-legged frogs or Central California tiger salamanders until all clearing and grubbing activities are complete. After project completion, all temporarily affected areas shall be returned to original grade and contours to the maximum extent practicable, protected with proper erosion control materials, and revegetated with native species appropriate for the region and habitat communities on site.

11. **Reduce Spread of Invasive Species**. To reduce the spread of invasive non-native plant species and minimize the potential decrease of palatable vegetation for wildlife species, Caltrans will comply with Executive Order 13112. This order is provided to prevent the introduction of invasive species and provide for their control in order to minimize the economic, ecological, and human health impacts. In the event that high- or medium-priority noxious weeds, as defined by the California Department of Food and Agriculture or the California Invasive Plant Council, are disturbed or removed during construction-related activities, the contractor will contain the plant material associated with these noxious weeds and dispose of it in a manner that will not promote the spread of the species. The contractor will be responsible for obtaining all permits, licenses, and environmental clearances for properly disposing of materials. Areas subject to noxious weed removal or disturbance will be replanted with fast-growing native grasses or a native erosion control seed mixture. If seeding is not possible, the area should be covered to the extent practicable with heavy black plastic solarization material until the end of the project.

12. **Replant, Reseed, and Restore Disturbed Areas**. All slopes or unpaved areas affected by the proposed action will be restored to natural conditions. Slopes and bare ground will be reseeded with native grasses and shrubs characteristic of the floristic region and native local habitats to stabilize soils and prevent erosion. Where disturbance includes the removal of trees or plants, native species will be replanted and maintained until they become established. A revegetation plan with success criteria will be submitted to the Service for review and approval. Temporary effects comprise areas denuded, manipulated, or otherwise modified from their existing, pre-project conditions, thereby removing one or more essential components of a listed species' habitat as a result of project activities that include, but are not limited to, construction, staging, storage, lay down, vehicle access, parking, etc. Temporary effects must be restored to baseline habitat values or better within one year following initial disturbance. Areas subject to ongoing operations and maintenance are not considered temporary even if they are restored within one year following initial disturbance. Affected areas not fulfilling these criteria are considered permanent.

Action Area

The action area is defined in 50 CFR § 402.02, as "all areas to be affected directly or indirectly by the Federal action and not merely the immediate area involved in the action." For the proposed project, the action area encompasses 13.0 acres and includes the 11.9-acre project footprint and surrounding lands in unincorporated Santa Clara County. The action area includes the project footprint,

equipment staging area, access routes, Caltrans ROW, temporary construction easements, and adjacent lands that will be subjected to physical, noise, light, and vibration disturbance. Habitat within the action area comprises paved (4.7 acres), graveled, cleared, or otherwise previously disturbed dirt areas that are devoid of vegetation (0.7-acre), rural residential (0.3-acre), agricultural cropland and vineyards (2.2 acres), non-jurisdictional drainage ditch (1.1 acres), Mediterranean California naturalized annual and perennial grassland (3.5 acres), remnant mixed oak woodland/California walnut groves (0.4-acre), and willow riparian forest & scrub (0.1-acre) along San Ysidro Creek.

Analytical Framework for the Jeopardy Determinations

The following analysis relies on four components to support the jeopardy determination for the California red-legged frog and Central California tiger salamander: (1) the *Status of the Species*, which evaluates the species' range wide condition, the factors responsible for that condition, and their survival and recovery needs; (2) the *Environmental Baseline*, which evaluates the condition of these species in the action area, the factors responsible for that condition, and the role of the action area in the species' survival and recovery; (3) the *Effects of the Action*, which determines the direct and indirect effects of the proposed Federal action and the effects of any interrelated or interdependent activities on these species; and (4) *Cumulative Effects*, which evaluates the effects of future, non-Federal activities in the action area on these species.

In accordance with the implementing regulations for Section 7 and Service policy, the jeopardy determination is made in the following manner: the effects of the proposed Federal action are evaluated in the context of the aggregate effects of all factors that have contributed to the current status of the California red-legged frog and Central California tiger salamander. Additionally, for non-Federal activities in the action area, we will evaluate those actions likely to affect the species in the future, to determine if implementation of the proposed action is likely to cause an appreciable reduction in the likelihood of both its survival and recovery in the wild.

The following analysis places an emphasis on using the range-wide survival and recovery needs of the California red-legged frog and Central California tiger salamander, and the role of the action area in providing for those needs as the context for evaluating the significance of the effects of the proposed programmatic Federal action, taken together with cumulative effects, for purposes of making the jeopardy determination.

Status of the Species

California Red-legged Frog

Listing Status: The California red-legged frog was listed as a threatened species on May 23, 1996 (61 FR 25813) (Service 1996). Critical habitat was designated for this species on April 13, 2006 (71 FR 19244) (Service 2006) and revisions to the critical habitat designation were published on March 17, 2010 (75 FR 12816) (Service 2010). At this time, the Service recognized the taxonomic change from *Rana aurora draytonii* to *Rana draytonii* (Shaffer *et al.* 2010). A recovery plan was published for the California red-legged frog on September 12, 2002 (Service 2002).

Description: The California red-legged frog is the largest native frog in the western United States (Wright and Wright 1949), ranging from 1.5 to 5.1 inches in length (Stebbins 2003). The abdomen and hind legs of adults are largely red, while the back is characterized by small black flecks and larger irregular dark blotches with indistinct outlines on a brown, gray, olive, or reddish background color.

Dorsal spots usually have light centers (Stebbins 2003), and dorsolateral folds are prominent on the back. Larvae (tadpoles) range from 0.6 to 3.1 inches in length, and the background color of the body is dark brown and yellow with darker spots (Storer 1925).

Distribution: The historic range of the California red-legged frog extended from the vicinity of Elk Creek in Mendocino County, California, along the coast inland to the vicinity of Redding in Shasta County, California, and southward to northwestern Baja California, Mexico (Fellers 2005; Jennings and Hayes 1985; Hayes and Krempels 1986). The species was historically documented in 46 counties but the taxa now remains in 238 streams or drainages within 23 counties, representing a loss of 70 percent of its former range (Service 2002). California red-legged frogs are still locally abundant within portions of the San Francisco Bay area and the central California coast. Isolated populations have been documented in the Sierra Nevada, northern coast, and northern Transverse Ranges. The species is believed to be extirpated from the southern Transverse and Peninsular Ranges, but is still present in Baja California, Mexico (CDFW 2015).

Status and Natural History: California red-legged frogs predominately inhabit permanent water sources such as streams, lakes, marshes, natural and manmade ponds, and ephemeral drainages in valley bottoms and foothills up to 4,921 feet in elevation (Jennings and Hayes 1994, Bulger *et al.* 2003, Stebbins 2003). However, they also inhabit ephemeral creeks, drainages, and ponds with minimal riparian and emergent vegetation. California red-legged frogs breed from November to April, although earlier breeding records have been reported in southern localities. Breeding generally occurs in still or slow-moving water often associated with emergent vegetation, such as cattails, tules, or overhanging willows (Storer 1925, Hayes and Jennings 1988). Female frogs deposit egg masses on emergent vegetation so that the egg mass floats on or near the surface of the water (Hayes and Miyamoto 1984).

Habitat includes nearly any area within 1-2 miles of a breeding site that stays moist and cool through the summer including vegetated areas with coyote brush, California blackberry thickets, and root masses associated with willow and California bay trees (Fellers 2005). Sheltering habitat for California red-legged frogs potentially includes all aquatic, riparian, and upland areas within the range of the species and includes any landscape feature that provides cover, such as animal burrows, boulders or rocks, organic debris such as downed trees or logs, and industrial debris. Agricultural features such as drains, watering troughs, spring boxes, abandoned sheds, or haystacks may also be used. Incised stream channels with portions narrower and depths greater than 18 inches also may provide important summer sheltering habitat. Accessibility to sheltering habitat is essential for the survival of California red-legged frogs within a watershed, and can be a factor limiting frog population numbers and survival.

California red-legged frogs do not have a distinct breeding migration (Fellers 2005). Adults are often associated with permanent bodies of water. Some individuals remain at breeding sites year-round, while others disperse to neighboring water features. Dispersal distances are typically less than 0.5 mile, with a few individuals moving up to 1-2 miles (Fellers 2005). Movements are typically along riparian corridors, but some individuals, especially on rainy nights, move directly from one site to another through normally inhospitable habitats, such as heavily grazed pastures or oak-grassland savannas (Fellers 2005).

In a study of California red-legged frog terrestrial activity in a mesic area of the Santa Cruz Mountains, Bulger *et al.* (2003) categorized terrestrial use as migratory and non-migratory. The latter occurred from one to several days and was associated with precipitation events. Migratory

movements were characterized as the movement between aquatic sites and were most often associated with breeding activities. Bulger *et al.* (2003) reported that non-migrating frogs typically stayed within 200 feet of aquatic habitat 90 percent of the time and were most often associated with dense vegetative cover, *i.e.*, California blackberry, poison oak, and coyote brush. Dispersing frogs in northern Santa Cruz County traveled distances from 0.25 mile to more than 2 miles without apparent regard to topography, vegetation type, or riparian corridors (Bulger *et al.* 2003).

In a study of California red-legged frog terrestrial activity in a xeric environment in eastern Contra Costa County, Tatarian (2008) noted that 57 percent of frogs fitted with radio transmitters in the Round Valley study area stayed at their breeding pools, whereas 43 percent moved into adjacent upland habitat or to other aquatic sites. Her study reported a peak seasonal terrestrial movement occurring in the fall months associated with the first 0.2 inch of precipitation and tapering off into spring. Upland movement activities ranged from 3 to 233 feet, averaging 80 feet, and were associated with a variety of refugia including grass thatch, crevices, cow hoof prints, ground squirrel burrows at the base of trees or rocks, logs, and under man-made structures; others were associated with upland sites lacking refugia (Tatarian 2008). The majority of terrestrial movements lasted from 1 to 4 days; however, one adult female was reported to remain in upland habitat for 50 days (Tatarian 2008). Upland refugia closer to aquatic sites were used more often and were more commonly associated with areas exhibiting higher object cover, *e.g.*, woody debris, rocks, and vegetative cover. Subterranean cover was not significantly different between occupied upland habitat and non-occupied upland habitat.

California red-legged frogs are often prolific breeders, laying their eggs during or shortly after large rainfall events in late winter and early spring (Hayes and Miyamoto 1984). Egg masses containing 2,000 - 5,000 eggs are attached to vegetation below the surface and hatch after 6 - 14 days (Storer 1925, Jennings and Hayes 1994). In coastal lagoons, the most significant mortality factor in the pre-hatching stage is water salinity (Jennings *et al.* 1992). Eggs exposed to salinity levels greater than 4.5 parts per thousand resulted in 100 percent mortality (Jennings and Hayes 1990). Increased siltation during the breeding season can cause asphyxiation of eggs and small larvae. Larvae undergo metamorphosis 3.5 - 7 months following hatching and reach sexual maturity at 2 - 3 years of age (Storer 1925; Wright and Wright 1949; Jennings and Hayes 1985, 1990, 1994). Of the various life stages, larvae probably experience the highest mortality rates, with less than 1 percent of eggs laid reaching metamorphosis (Jennings *et al.* 1992). California red-legged frogs may live 8 to 10 years (Jennings *et al.* 1992). Populations can fluctuate from year to year; favorable conditions allow the species to have extremely high rates of reproduction and thus produce large numbers of dispersing young and a concomitant increase in the number of occupied sites. In contrast, the animal may temporarily disappear from an area when conditions are stressful (*e.g.*, during periods of drought, disease, etc.).

The diet of California red-legged frogs is highly variable and changes with the life history stage. The diet of the larvae is not well studied, but is likely similar to that of other ranid frogs, feeding on algae, diatoms, and detritus by grazing on the surface of rocks and vegetation (Fellers 2005; Kupferberg 1996a, 1996b, 1997). Hayes and Tennant (1985) analyzed the diets of California red-legged frogs from Cañada de la Gaviota in Santa Barbara County during the winter of 1981 and found invertebrates (comprising 42 taxa) to be the most common prey item consumed; however, they speculated that this was opportunistic and varied based on prey availability. They ascertained that larger frogs consumed larger prey and were recorded to have preyed on Pacific chorus frogs, threespine stickleback, and, to a limited extent, California mice, which were abundant at the study site (Hayes and Tennant 1985, Fellers 2005). Although larger vertebrate prey was consumed less

frequently, it represented over half of the prey mass eaten by larger frogs suggesting that such prey may play an energetically important role in their diets (Hayes and Tennant 1985). Juvenile and subadult/adult frogs varied in their feeding activity periods; juveniles fed for longer periods throughout the day and night, while subadult/adults fed nocturnally (Hayes and Tennant 1985). Juveniles were significantly less successful at capturing prey and all life history stages exhibited poor prey discrimination, feeding on several inanimate objects that moved through their field of view (Hayes and Tennant 1985).

Threats: Habitat loss, non-native species introduction, and urban encroachment are the primary factors that have adversely affected the California red-legged frog throughout its range. Several researchers in central California have noted the decline and eventual local disappearance of California and northern red-legged frogs in systems supporting bullfrogs (Jennings and Hayes 1990, Twedt 1993), red swamp crayfish, signal crayfish, and several species of warm water fish including sunfish, goldfish, common carp, and mosquitofish (Moyle 1976; Barry 1992; Hunt 1993; Fisher and Schaffer 1996). This has been attributed to predation, competition, and reproduction interference. Twedt (1993) documented bullfrog predation of juvenile northern red-legged frogs, and suggested that bullfrogs could prey on subadult California red-legged frogs as well. Bullfrogs may also have a competitive advantage over California red-legged frogs. For instance, bullfrogs are larger and possess more generalized food habits (Bury and Whelan 1984). In addition, bullfrogs have an extended breeding season (Storer 1933) during which an individual female can produce as many as 20,000 eggs (Emlen 1977). Furthermore, bullfrog larvae are unpalatable to predatory fish (Kruse and Francis 1977). Bullfrogs also interfere with California red-legged frog reproduction by eating adult male California red-legged frogs. Both California and northern red-legged frogs have been observed in amplexus (mounted on) with both male and female bullfrogs (Jennings and Hayes 1990, Jennings 1993, Twedt 1993). Thus bullfrogs are able to prey upon and out-compete California red-legged frogs, especially in sub-optimal habitat.

The urbanization of land within and adjacent to California red-legged frog habitat has also affected the threatened amphibian. These declines are attributed to channelization of riparian areas, enclosure of the channels by urban development that blocks dispersal, and the introduction of predatory fishes and bullfrogs. Diseases may also pose a significant threat, although the specific effects of disease on the California red-legged frog are not known. Pathogens are suspected of causing global amphibian declines (Davidson *et al.* 2003). Chytridiomycosis and ranaviruses are a potential threat because these diseases have been found to adversely affect other amphibians, including the listed species (Davidson *et al.* 2003; Lips *et al.* 2006). Mao *et al.* (1999 cited in Fellers 2005) reported northern red-legged frogs infected with an iridovirus, which was also presented in sympatric threespine sticklebacks in northwestern California. Non-native species, such as bullfrogs and non-native tiger salamanders that live within the range of the California red-legged frog have been identified as potential carriers of these diseases (Garner *et al.* 2006). Human activities can facilitate the spread of disease by encouraging the further introduction of non-native carriers and by acting as carriers themselves (*i.e.*, contaminated boots, waders, or fishing equipment). Human activities can also introduce stress by other means, such as habitat fragmentation, that results in the listed species being more susceptible to the effects of disease.

Recovery Plan: The recovery plan for the California red-legged frog identifies eight recovery units (Service 2002). The establishment of these recovery units is based on the determination that various regional areas of the species' range are essential to its survival and recovery. The status of the California red-legged frog was considered within the small-scale recovery units as opposed to their overall range. These recovery units are delineated by major watershed boundaries as defined by

U.S. Geological Survey hydrologic units and the limits of its range. The goal of the recovery plan is to protect the long-term viability of all extant populations within each recovery unit. Within each recovery unit, core areas have been delineated and represent contiguous areas of moderate to high California red-legged frog densities that are relatively free of exotic species such as bullfrogs. The goal of designating core areas is to protect metapopulations. Thus when combined with suitable dispersal habitat, will allow for the long-term viability within existing populations. The management strategy identified within the Recovery Plan will allow for the recolonization of habitats within and adjacent to core areas that are naturally subjected to periodic localized extinctions, thus assuring the long-term survival and recovery of California red-legged frogs.

Central California Tiger Salamander

Listing Status: The final rule listing the Central Valley population of the California tiger salamander as a threatened species was published on August 4, 2004 (Service 2004). Critical habitat was designated on August 23, 2005 in 19 counties for the Central Valley population (Service 2005).

Description: The California tiger salamander is a large, stocky, terrestrial salamander with a broad, rounded snout. Recorded adult measurements have been as much as 8.2 inches (20.8 centimeters) long (Petranka 1998; Stebbins 2003). Tiger salamanders exhibit sexual dimorphism (differences in body appearance based on gender) with males tending to be larger than females. Tiger salamander coloration generally consists of random white or yellowish markings against a black body. The markings on adults California tiger salamanders tend to be more concentrated on the lateral sides of the body, whereas other tiger salamander species tend to have brighter yellow spotting that is heaviest on the dorsal surface.

Distribution: The California tiger salamander is endemic to California and historically inhabited the low-elevation grassland and oak savanna plant communities of the Central Valley, adjacent foothills, and Inner Coast Ranges (Jennings and Hayes 1994; Storer 1925; Shaffer et al. 1993). The species has been recorded from near sea level to approximately 3,900 feet (1,189 meters) in the Coast Ranges and to approximately 1,600 feet (488 meters) in the Sierra Nevada foothills (Shaffer et al. 2004). Along the Coast Ranges, the species occurred from the Santa Rosa area of Sonoma County, south to the vicinity of Buellton in Santa Barbara County. The historic distribution in the Central Valley and surrounding foothills included northern Yolo County southward to northwestern Kern County and northern Tulare County. Three distinct California tiger salamander populations are recognized and correspond to Santa Maria area within Santa Barbara County, the Santa Rosa Plain in Sonoma County, and vernal pool/grassland habitats throughout the Central Valley.

Status and Natural History: The tiger salamander has an obligate biphasic life cycle (Shaffer et al. 2004). Although the larvae develop in the vernal pools and ponds in which they were born, tiger salamanders are otherwise terrestrial and spend most of their post-metamorphic lives in widely dispersed underground retreats (Shaffer et al. 2004; Trenham et al. 2001). Because they spend most of their lives underground, tiger salamanders are rarely encountered even in areas where salamanders are abundant. Subadult and adult tiger salamanders typically spend the dry summer and fall months in the burrows of small mammals, such as California ground squirrels and Botta's pocket gopher (*Thomomys bottae*) (Storer 1925; Loredo and Van Vuren 1996; Petranka 1998; Trenham 1998a). Although ground squirrels have been known to eat tiger salamanders, the relationship with their burrowing hosts is primarily commensal (an association that benefits one member while the other is not affected) (Loredo et al. 1996; Semonsen 1998).

Tiger salamanders may also use landscape features such as leaf litter or desiccation cracks in the soil for upland refugia. Burrows often harbor camel crickets and other invertebrates that provide likely prey for tiger salamanders. Underground refugia also provide protection from the sun and wind associated with the dry California climate that can cause excessive drying of amphibian skin. Although California tiger salamanders are members of a family of "burrowing" salamanders, they are not known to create their own burrows. This may be due to the hardness of soils in the California ecosystems in which they are found. Tiger salamanders depend on persistent small mammal activity to create, maintain, and sustain sufficient underground refugia for the species. Burrows are short lived without continued small mammal activity and typically collapse within approximately 18 months (Loredo et al. 1996).

Upland burrows inhabited by tiger salamanders have often been referred to as aestivation sites. However, "aestivation" implies a state of inactivity, while most evidence suggests that tiger salamanders remain active in their underground dwellings. A recent study has found that tiger salamanders move, feed, and remain active in their burrows (Van Hattem 2004). Because tiger salamanders arrive at breeding ponds in good condition and are heavier when entering the pond than when leaving, researchers have long inferred that tiger salamanders are feeding while underground. Recent direct observations have confirmed this (Trenham 2001; Van Hattem 2004). Thus, "upland habitat" is a more accurate description of the terrestrial areas used by tiger salamanders.

Tiger salamanders typically emerge from their underground refugia at night during the fall or winter rainy season (November-May) to migrate to their breeding ponds (Stebbins 1989; Shaffer et al. 1993; Trenham et al. 2000). The breeding period is closely associated with the rainfall patterns in any given year with less adults migrating and breeding in drought years (Loredo and Van Vuren 1996; Trenham et al. 2000). Male salamander are typically first to arrive and generally remain in the ponds longer than females. Results from a 7-year study in Monterey County suggested that males remained in the breeding ponds for an average of 44.7 days while females remained for an average of only 11.8 days (Trenham et al. 2000). Historically, breeding ponds were likely limited to vernal pools, but now include livestock stock ponds. Ideal breeding ponds are typically fishless, and seasonal or semi-permanent (Barry and Shaffer 1994; Petranka 1998).

While in the ponds, adult salamanders mate and then the females lay their eggs in the water (Twitty 1941; Shaffer et al. 1993; Petranka 1998). Egg laying typically reaches a peak in January (Loredo and Van Vuren 1996; Trenham et al. 2000). Females attach their eggs singly, or in rare circumstances, in groups of two to four, to twigs, grass stems, vegetation, or debris (Storer 1925; Twitty 1941). Eggs are often attached to objects, such as rocks and boards in ponds with no or limited vegetation (Jennings and Hayes 1994). Clutch sizes from a Monterey County study had an average of 814 eggs (Trenham et al. 2000). Seasonal pools may not exhibit sufficient depth, persistence, or other necessary parameters for adult breeding during times of drought (Barry and Shaffer 1994). After breeding and egg laying is complete, adults leave the pool and return to their upland refugia (Loredo et al. 1996; Trenham 1998a). Adult salamanders often continue to emerge nightly for approximately the next two weeks to feed amongst their upland habitat (Shaffer et al. 1993).

Tiger salamander larvae typically hatch within 10 to 24 days after eggs are laid (Storer 1925). The peak emergence of these metamorphs is typically between mid-June and mid-July (Loredo and Van Vuren 1996; Trenham et al. 2000). The larvae are totally aquatic and range in length from approximately 0.45 to 0.56 inches (1.14 to 1.42 centimeters) (Petranka 1998). They have yellowish gray bodies, broad fat heads, large, feathery external gills, and broad dorsal fins that extend well up their back. The larvae feed on zooplankton, small crustaceans, and aquatic insects for about six

weeks after hatching, after which they switch to larger prey (J. Anderson 1968). Larger larvae have been known to consume the tadpoles of Pacific chorus frogs (*Pseudacris regilla*), western spadefoot toads (*Spea hammondii*), and California red-legged frogs (J. Anderson 1968; P. Anderson 1968; University of California 2005). Tiger salamander larvae are among the top aquatic predators in seasonal pool ecosystems. When not feeding, they often rest on the bottom in shallow water but are also found throughout the water column in deeper water. Young salamanders are wary and typically escape into vegetation at the bottom of the pool when approached by potential predators (Storer 1925).

The tiger salamander larval stage is typically completed in 3 to 6 months with most metamorphs entering upland habitat during the summer (Petranka 1998). In order to be successful, the aquatic phase of this species' life history must correspond with the persistence of its seasonal aquatic habitat. Most seasonal ponds and pools dry up completely during the summer. Amphibian larvae must grow to a critical minimum body size before they can metamorphose (change into a different physical form) to the terrestrial stage (Wilbur and Collins 1973).

Larval development and metamorphosis can vary and is often site-dependent. Larvae collected near Stockton in the Central Valley during April varied between 1.88 to 2.32 inches (4.78 to 5.89 centimeters) in length (Storer 1925). Feaver (1971) found that larvae metamorphosed and left breeding pools 60 to 94 days after eggs had been laid, with larvae developing faster in smaller, more rapidly drying pools. Longer ponding duration typically results in larger larvae and metamorphosed juveniles that are more likely to survive and reproduce (Pechmann et al. 1989; Semlitsch et al. 1988; Morey 1998; Trenham 1998b). Larvae will perish if a breeding pond dries before metamorphosis is complete (P. Anderson 1968; Feaver 1971). Pechmann et al. (1989) found a strong positive correlation between ponding duration and total number of metamorphosing juveniles in five salamander species. In Madera County, Feaver (1971) found that only 11 of 30 sampled pools supported larval California tiger salamanders, and 5 of these dried before metamorphosis could occur. Therefore, out of the original 30 pools, only 6 (20 percent) provided suitable conditions for successful reproduction that year. Size at metamorphosis is positively correlated with stored body fat and survival of juvenile amphibians, and negatively correlated with age at first reproduction (Semlitsch et al. 1988; Scott 1994; Morey 1998).

Following metamorphosis, juveniles leave their pools and enter upland habitat. This emigration can occur in both wet and dry conditions (Loredo and Van Vuren 1996; Loredo et al. 1996). Wet conditions are more favorable for upland travel but rare summer rain events seldom occur as metamorphosis is completed and ponds begin to dry. As a result, juveniles may be forced to leave their ponds on rainless nights. Under dry conditions, juveniles may be limited to seeking upland refugia in close proximity to their aquatic larval pool. These individuals often wait until the next winter's rains to move further into more suitable upland refugia. Although likely rare, larvae may over-summer in permanent ponds (University of California 2005). Juveniles remain active in their upland habitat, emerging from underground refugia during rainfall events to disperse or forage (Trenham and Shaffer 2005). Depending on location and other development factors, metamorphs will not return as adults to aquatic breeding habitat for 2 to 5 years (Loredo and Van Vuren 1996; Trenham et al. 2000).

Lifetime reproductive success for tiger salamander species is low. Results from one study suggest that the average female tiger salamander bred 1.4 times and produced 8.5 young per reproductive effort that survived to metamorphosis (Trenham et al.2000). This resulted in the output of roughly 11 metamorphic offspring over a breeding female's lifetime. The primary reason for low reproductive success may be that this relatively short-lived species requires two or more years to

become sexually mature (Shaffer et al. 1993). Some individuals may not breed until they are four to six years old. While California tiger salamanders may survive for more than ten years, many breed only once, and in one study, less than 5 percent of marked juveniles survived to become breeding adults (Trenham 1998b). With such low recruitment, isolated populations are susceptible to unusual, randomly occurring natural events as well human-caused factors that reduce breeding success and individual survival. Factors that repeatedly lower breeding success in isolated pools can quickly extirpate a population.

Dispersal and migration movements made by tiger salamanders can be grouped into two main categories: (1) breeding migration and (2) interpond dispersal. Breeding migration is the movement of salamanders to and from a pond from the surrounding upland habitat. After metamorphosis, juveniles move away from breeding ponds into the surrounding uplands, where they live continuously for several years. At a study in Monterey County, it was found that upon reaching sexual maturity, most individuals returned to their natal/ birth pond to breed, while 20 percent dispersed to other ponds (Trenham et al. 2001). After breeding, adult tiger salamanders return to upland habitats, where they may live for one or more years before attempting to breed again (Trenham et al. 2000).

Tiger salamanders are known to travel large distances between breeding ponds and their upland refugia. Generally it is difficult to establish the maximum distances traveled by any species, but tiger salamanders in Santa Barbara County have been recorded dispersing up to 1.3 miles (2.1 kilometers) from their breeding ponds (Sweet 1998). Tiger salamanders are also known to travel between breeding ponds. One study found that 20 to 25 percent of the individuals captured at one pond were recaptured later at other ponds approximately 1,900 and 2,200 feet (579 to 671 meters) away (Trenham et al. 2001). In addition to traveling long distances during juvenile dispersal and adult migration, tiger salamanders may reside in burrows far from their associated breeding ponds.

Although previously sited information indicates that tiger salamanders can travel long distances, they typically remain close to their associated breeding ponds. A trapping study conducted in Solano County during the winter of 2002/2003 suggested that juveniles dispersed and used upland habitats further from breeding ponds than adults (Trenham and Shaffer 2005). More juvenile salamanders were captured at traps placed at 328, 656, and 1,312 feet (100, 200, and 400 meters) from a breeding pond than at 164 feet (50 meters). Approximately 20 percent of the captured juveniles were found at least 1,312 feet (400 meters) from the nearest breeding pond. The associated distribution curve suggested that 95 percent of juvenile salamanders were within 2,099 feet (640 meters) of the pond, with the remaining 5 percent being found at even greater distances. Preliminary results from the 2003-04 trapping efforts at the same study site detected juvenile tiger salamanders at even further distances, with a large proportion of the captures at 2,297 feet (700 meters) from the breeding pond (Trenham et al., unpublished data). Surprisingly, most juveniles captured, even those at 2,100 feet (640 meters), were still moving away from ponds. In Santa Barbara County, juvenile California tiger salamanders have been trapped approximately 1,200 feet (366 meters) away while dispersing from their natal pond (Science Applications International Corporation, unpublished data). These data show that many California tiger salamanders travel far while still in the juvenile stage. Post-breeding movements away from breeding ponds by adults appear to be much smaller. During post-breeding emigration from aquatic habitat, radio-equipped adult tiger salamanders were tracked to burrows between 62 to 813 feet (19 to 248 meters) from their breeding ponds (Trenham 2001). These reduced movements may be due to adult California tiger salamanders exiting the ponds with depleted physical reserves, or drier weather conditions typically associated with the post-breeding upland migration period.

California tiger salamanders are also known to use several successive burrows at increasing distances from an associated breeding pond. Although previously sited studies provide information regarding linear movement from breeding ponds, upland habitat features appear to have some influence on movement. Trenham (2001) found that radio-tracked adults were more abundant in grasslands with scattered large oaks (*Quercus* spp.), than in more densely wooded areas. Based on radio-tracked adults, there is no indication that certain habitat types are favored as terrestrial movement corridors (Trenham 2001). In addition, captures of arriving adults and dispersing new metamorphs were evenly distributed around two ponds completely encircled by drift fences and pitfall traps. Thus, it appears that dispersal into the terrestrial habitat occurs randomly with respect to direction and habitat types.

Threats: The California tiger salamander is imperiled throughout its range due to a variety of human activities (Service 2004). Current factors associated with declining tiger salamander populations include continued habitat loss and degradation due to agriculture and urbanization; hybridization with the non-native eastern tiger salamander (*Ambystoma tigrinum*) (Fitzpatrick and Shaffer 2004; Riley et al. 2003); and predation by introduced species. California tiger salamander populations are likely threatened by multiple factors but continued habitat fragmentation and colonization of non-native salamanders may represent the most significant current threats. Habitat isolation and fragmentation within many watersheds have precluded dispersal between sub-populations and jeopardized the viability of metapopulations (broadly defined as multiple subpopulations that occasionally exchange individuals through dispersal, and are capable of colonizing or "rescuing" extinct habitat patches). Other threats include predation and competition from introduced exotic species; possible commercial over-utilization; diseases; various chemical contaminants; road kill; and certain unrestrictive mosquito and rodent control operations. Currently, these various primary and secondary threats are largely not being offset by existing federal, state, or local regulatory mechanisms. The tiger salamander is also prone to chance environmental or demographic events, to which small populations are particularly vulnerable.

Thirty-one percent (221 of 711 records and occurrences) of all Central California tiger salamander records and occurrences are in Alameda, Santa Clara, San Benito (excluding the extreme western end of the County), southwestern San Joaquin, western Stanislaus, western Merced, and southeastern San Mateo counties. Of these counties, most of the records are from eastern Alameda and Santa Clara counties (Buckingham in litt. 2003; CDFG 2008; Service 2004b). The California Department of Fish and Wildlife (2015) now considers 13 of these records from the Bay Area region as extirpated or likely to be extirpated.

Due to the extensive losses of vernal pool complexes and their limited distribution in the Bay Area region, many Central California tiger salamander breeding sites consist of artificial water bodies. Overall, 89 percent (124) of the identified water bodies are stock, farm, or berm ponds used by cattle grazing and/or as a temporary water source for small farm irrigation (CDFW 2015). This possibly places the Central California tiger salamander at great risk of hybridization with non-native tiger salamanders, especially in Santa Clara and San Benito counties. Without long-term maintenance, the longevity of artificial breeding habitats is uncertain relative to naturally occurring vernal pools that are dependent on the continuation of seasonal weather patterns (Shaffer in litt. 2003).

Environmental Baseline

California Red-legged Frog

The action area is located within the Santa Clara Valley Core Area (Unit 17) (South Santa Clara Valley Hydrologic Sub-Area) and the South and East Bay Recovery Unit (Service 2002, 2006). The recovery action guidelines provide recommendations for minimizing the effects of various land and water uses, non-native species/predators, and air and water contamination in addition to outlining recommendations for habitat preservation. These recommendations assist in the conservation and recovery of the species, protect high quality habitat within core areas and priority watersheds, increase opportunities for dispersal, population expansion, and recolonization, and provide connectivity between core areas and occupied watersheds. The conservation needs for the Santa Clara Valley Core Area are to: (1) protect existing populations; and (2) control non-native predators.

There are nine reported occurrences of California red-legged frogs within 5 miles of the action area. The nearest occurrence (Occurrence #232) is located approximately 3.2 miles to the south from an artificial irrigation pond in 1997 comprising 7 adults and 14 larvae. According to the biological assessment, undeveloped habitat within the action area consists of rural residential, agricultural cropland and vineyards, non-jurisdictional drainage ditch, Mediterranean California naturalized annual and perennial grassland, remnant mixed oak woodland/California walnut groves, and willow riparian forest & scrub along San Ysidro Creek. These habitat features provide suitable upland and dispersal habitat for California red-legged frogs. San Ysidro Creek is an ephemeral stream and is dry most of the year, but provides suitable non-breeding aquatic habitat during wet periods. The reach of creek within the action area is flat-bottomed and devoid of pools or depressions that could support breeding. Additionally, no emergent vegetation was documented and instream weedy upland species suggests the hydroperiod is relatively short. The nearest potential breeding sites are located 0.5 to 1 mile to the south and east. No barriers exist between the action area and these potential breeding sites.

Upland and dispersal habitats within the action area have been subject to regular disturbance by residents including discing and farming of row crops, which can temporarily modify key habitat features resulting in spatial-temporal habitat loss and injury or mortality to frogs. The action area also contains scattered small mammal burrows and various landscaped and miscellaneous features suitable for upland refugia. SR-152 does not present a barrier to California red-legged frog movement, but does pose a threat to the survivability of individual frogs attempting to cross the roadway due to high traffic flows, which may result in injury or mortality.

Based on the habitat suitability within the action area, known occupancy of California red-legged frogs within the project vicinity, connectivity to adjacent occupied habitats and the presence of suitable breeding habitat within dispersal distance to the action area, the Service has determined there is a reasonable potential for California red-legged frogs to inhabit and disperse through the action area.

Central California Tiger Salamander

The action area is not located within designated critical habitat; however, it is located approximately 1,600 feet west of the San Felipe Unit EB-12 (Service 2005). The project is located within the known range of the Central California tiger salamander and suitable upland and dispersal habitat is present in the action area.

According to the biological assessment, there are two reported occurrences of Central California tiger salamanders within 1.25 miles of the action area and an additional 11 occurrences within five miles. The nearest occurrence (Occurrence #184) is located 0.4-mile to the east, just east of the Bloomfield Avenue intersection with SR-152 comprising 25 juveniles in a cattle pond surrounded by grassland and valley oaks from 1992. A second occurrence is a nonspecific location that overlaps with the action area and extends southwest for more than 5 miles. The occurrence record describes habitat consisting of a large perennial reservoir within a seasonal drainage swale surrounded by grazed nonnative annual grassland and oak woodland at the base of the foothills of the Santa Cruz Mountains. Central California tiger salamanders are distributed throughout the western foothills north, east and south of the action area. All life stages have been reported in cattle ponds, stock ponds, and adjacent uplands in the valley bottom west of the City of Gilroy.

According to the biological assessment, undeveloped habitat within the action area consists of rural residential, agricultural cropland and vineyards, non-jurisdictional drainage ditch, Mediterranean California naturalized annual and perennial grassland, remnant mixed oak woodland/California walnut groves, and willow riparian forest & scrub along San Ysidro Creek. These habitat features provides suitable upland and dispersal habitat for Central California tiger salamanders, but no suitable breeding habitat is present within the action area. Habitats within the action area have been subject to regular disturbance by residents including discing and farming of row crops, which can temporarily modify key habitat features resulting in spatial-temporal habitat loss and injury or mortality to salamanders. The action area also contains scattered small mammal burrows suitable for upland aestivation. No barriers exist between the action area and occupied or the potential breeding ponds located 0.4-mile to the west. However, SR-152 poses a threat to the survivability of individual animals attempting to cross the roadway resulting in injury or mortality. A second potential breeding pond located 0.7-mile to the south is separated from the action area by agricultural row crops and a vineyard, but these fields do not present a barrier to movement and dispersal. The reach of San Ysidro Creek within the action area is an open, flat-bottomed ephemeral stream devoid of breeding pools, lacks a developed riparian corridor, and does not support a hydrologic period to sustain amphibian larvae through metamorphosis.

Based on the habitat suitability within the action area, known occupancy of Central California tiger salamanders within the project vicinity, connectivity to adjacent occupied habitats and the presence of suitable breeding habitat within dispersal distance to the action area, the Service has determined there is a reasonable potential for Central California tiger salamanders to inhabit and disperse through the action area.

Effects of the Action

<u>California Red-legged Frog and Central California Tiger Salamander</u>

The proposed project will likely adversely affect the California red-legged frog and Central California tiger salamanders by harming or harassing juveniles and adults inhabiting suitable upland, dispersal, and non-breeding aquatic habitat within the action area. The aspects of the proposed action most likely to affect the California red-legged frog and Central California tiger salamander are confined to the construction phase of the project associated with shoulder widening, culvert modifications, and general off-pavement construction activities. No work is planned within the bed and bank of San Ysidro Creek; therefore, no effects to non-breeding aquatic habitat are anticipated.

Construction noise, vibration, and increased human activity may interfere with normal behaviors – feeding, sheltering, movement between refugia and foraging grounds, and other essential behaviors

of the California red-legged frog and Central California tiger salamander – resulting in avoidance of areas that have suitable habitat but intolerable levels of disturbance. Short-term temporal effects will occur when vegetative cover and subterranean upland habitat is removed during project construction. Caltrans proposes to minimize these effects, in part, by locating construction staging, storage and parking areas outside of sensitive habitat; clearly marking construction work boundaries to prevent crews from affecting more habitat than is absolutely necessary, installing WEF to allow California red-legged frogs and Central California tiger salamanders to escape the work area and prevent them from (re-)entering the work area, and revegetating all areas disturbed by project activities.

The proposed construction activities could result in the introduction of chemical contaminants to the site. California red-legged frogs and Central California tiger salamanders using these areas could be exposed to any contaminants that are present at the site. Exposure pathways could include inhalation, dermal contact, direct ingestion, or secondary ingestion of contaminated soil, plants, or prey species. Exposure to contaminants could cause short- or long-term morbidity, possibly resulting in reduced productivity or mortality. Caltrans proposes to minimize these risks by implementing a Storm Water Pollution Prevention Plan, erosion control BMP, and a Spill Response Plan, which will consist of refueling, oiling or cleaning of vehicles and equipment a minimum of 50 feet from aquatic resources; installing coir rolls, straw wattles and/or silt fencing to capture sediment and prevent runoff or other harmful chemicals from entering the aquatic features; and locating staging, storage and parking areas away from aquatic habitats.

Preconstruction surveys and the relocation of individual California red-legged frogs and Central California tiger salamanders by a Service-approved biologist will minimize the likelihood of serious injury or mortality; however, capturing and handling frogs may result in stress during handling, containment, and transport. Death and injury of individuals could occur at the time of relocation or later in time subsequent to their release. Although survivorship for translocated amphibians has not been estimated, survivorship of translocated wildlife, in general, is low because of intraspecific competition, lack of familiarity with the relocation site with regard to breeding, feeding, and sheltering habitats, risk of contracting disease in foreign environment, and increased risk of predation. These effects will be minimized by using qualified Service-approved biologists, limiting the duration of handling, and relocating amphibians to suitable nearby habitat.

Biologists and construction workers traveling to the action area from other project sites may transmit diseases by introducing contaminated equipment. The chance of a disease being introduced into a new area is greater today than in the past due to the increasing occurrences of disease throughout amphibian populations in California and the United States. It is possible that chytridiomycosis, caused by chytrid fungus (*Batrachochytrium dendrobatidis*), may exacerbate the effects of other diseases on amphibians or increase the sensitivity of the amphibian to environmental changes (e.g., water pH) that reduce normal immune response capabilities (Bosch et al. 2001, Weldon et al. 2004). Implementing proper decontamination procedures prior to and following aquatic surveys and handling of frogs and salamanders will minimize the risk of transferring diseases through contaminated equipment or clothing.

Temporary effects comprise areas denuded, manipulated, or otherwise modified from their existing, pre-project conditions, thereby removing one or more essential components of a listed species' habitat as a result of project activities that include, but are not limited to, construction, staging, storage, lay down, vehicle access, parking, etc. Temporary effects must be restored to baseline habitat values or better within one year following initial disturbance. Areas subject to ongoing operations and maintenance are not considered temporary even if they are restored within one year

following initial disturbance. Affected areas not fulfilling these criteria are considered permanent. This habitat would become unavailable to these species during the construction phase and could result in loss of foraging or movement habitat, altered behavioral displays (e.g., flushing from cover during vegetation clearing or ground disturbing activities, decreased foraging success, increased risk of predation, etc.), and displacement from or avoidance of habitat features within the action area. The proposed action would result in the temporary loss and/or degradation of 3.71 acres of California red-legged frog and Central California tiger salamander upland and dispersal habitat.

These effects will be further minimized by installing environmentally sensitive area fencing to keep workers from straying into otherwise undisturbed habitat; erecting WEF to deter species from wandering onto the construction site; implementing storm water and erosion BMP; educating workers about the presence of California red-legged frogs and Central California tiger salamanders, their habitat, identification, regulatory laws, and avoidance and minimization measures; and requiring a Service-approved biologist(s) to be present to monitor project activities within or adjacent to suitable habitat.

Cumulative Effects

Cumulative effects include the effects of future State, Tribal, local, or private actions that are reasonably certain to occur in the action area considered in this biological opinion. Future Federal actions that are unrelated to the proposed action are not considered in this section because they require separate consultation pursuant to section 7 of the Act. During this consultation, the Service did not identify any future non-federal actions that are reasonably certain to occur in the action area of the proposed project.

Conclusion

After reviewing the current status of the California red-legged frog and Central California tiger salamander, the environmental baseline for the action area, the effects of the proposed SR-152 Shoulder Widening Project, and the cumulative effects, it is the Service's biological opinion that the SR-152 Shoulder Widening Project, as proposed, is not likely to jeopardize the continued existence of the California red-legged frog or Central California tiger salamander. The Service reached this conclusion because the project-related effects to the species, when added to the environmental baseline and analyzed in consideration of all potential cumulative effects, will not rise to the level of precluding recovery or reducing the likelihood of survival of the species.

INCIDENTAL TAKE STATEMENT

Section 9 of the Act and Federal regulation pursuant to section 4(d) of the Act prohibit the take of endangered and threatened species, respectively, without special exemption. Take is defined as to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect, or to attempt to engage in any such conduct. Harass is defined by FWS regulations at 50 CFR 17.3 as an intentional or negligent act or omission which creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering. Harm is defined by the same regulations as an act which actually kills or injures wildlife. Harm is further defined to include significant habitat modification or degradation that results in death or injury to listed species by significantly impairing essential behavior patterns, including breeding, feeding, or sheltering. Incidental take is defined as take that is incidental to, and not the purpose of, the carrying out of an otherwise lawful activity. Under the terms of section 7(b)(4) and section 7(o)(2), taking that is incidental to and not intended as part of the agency action

is not considered to be prohibited taking under the Act provided that such taking is in compliance with the terms and conditions of this Incidental Take Statement.

The measures described below are non-discretionary, and must be undertaken by the Caltrans so that they become binding conditions of any grant or permit issued to the applicant, as appropriate, for the exemption in section 7(o)(2) to apply. The Caltrans has a continuing duty to regulate the activity covered by this incidental take statement. If the Caltrans (1) fails to assume and implement the terms and conditions or (2) fails to require the applicant to adhere to the terms and conditions of the incidental take statement through enforceable terms that are added to the permit or grant document, the protective coverage of section 7(o)(2) may lapse. In order to monitor the impact of incidental take, Caltrans must report the progress of the action and its impact on the species to the Service as specified in the incidental take statement [50 CFR §402.14(i)(3)].

Amount or Extent of Take

California Red-Legged Frog

The Service anticipates that incidental take of California red-legged frog will be difficult to detect for the following reason(s): their cryptic nature, utilization of dense riparian habitat, and typical startle response to flush into deep water or complex underwater habitat. There is a risk of harm, harassment, injury and mortality as a result of the proposed construction activities, the permanent and temporary loss/degradation of suitable habitat, and capture and relocation efforts; therefore, the Service is authorizing take incidental to the proposed action as; (1) the injury and mortality of one adult or juvenile California red-legged frog; and (2) the capture, harm, and harassment of all California red-legged frogs within the 13.0-acre action area.

Central California Tiger Salamander

The Service anticipates that incidental take of Central California tiger salamander will be difficult to detect for the following reason(s): cryptic nature, subterranean lifestyle, and predominately nocturnal behavior. There is a risk of harm, harassment, injury and mortality as a result of the proposed construction activities, the permanent and temporary loss/degradation of suitable habitat, and capture and relocation efforts; therefore, the Service is authorizing take incidental to the proposed action as; (1) the injury and mortality of one adult or juvenile Central California tiger salamander; and (2) the capture, harm, and harassment of all Central California tiger salamanders within 13.0-acre action area.

Upon implementation of the following *Reasonable and Prudent Measures*, incidental take of California red-legged frogs and Central California tiger salamanders associated with the SR-152 Shoulder Widening Project will become exempt from the prohibitions described in section 9 of the Act. No other forms of take are exempted under this opinion.

Effect of the Take

In the accompanying biological opinion, the Service determined that this level of anticipated take is not likely to result in jeopardy to the California red-legged frog or Central California tiger salamander.

Reasonable and Prudent Measures

All necessary and appropriate measures to avoid or minimize effects on the California red-legged frog and Central California tiger salamander resulting from implementation of this project have been

incorporated into the project's proposed conservation measures. Therefore, the Service believes the following Reasonable and Prudent Measure is necessary and appropriate to minimize incidental take of the California red-legged frog and Central California tiger salamander:

1. All conservation measures, as described in the biological assessment and restated here in the Project Description section of this biological opinion, shall be fully implemented and adhered to. Further, this Reasonable and Prudent Measure shall be supplemented by the Terms and Conditions below.

Terms and Conditions

In order to be exempt from the prohibitions of section 9 of the Act, Caltrans must ensure compliance with the following terms and conditions, which implement the reasonable and prudent measure described above. These terms and conditions are nondiscretionary.

1. **Compliance with Biological Opinion**. Caltrans shall include Special Provisions that include the Conservation Measures and the Terms and Conditions of this biological opinion in the solicitation for bid information for all contracts for the project that are issued by them to all contractors. Caltrans shall require all contractors and subcontractors to comply with the Act in the performance of the proposed action and shall perform the action as outlined in the Project Description of this biological opinion as provided by Caltrans in the Biological Assessment dated July 2014, and supporting documentation submitted to the Service in support of the action. Changes to the Project Description or performance of work outside the scope of this biological opinion are subject to the requirements of reinitiation of formal consultation.

2. **Implementation of Biological Opinion**. Caltrans shall ensure the Resident Engineer or their designee shall have full authority to implement and enforce all Conservation Measures and Terms and Conditions of this biological opinion. The Resident Engineer or his/her designee shall maintain a copy of this biological opinion onsite whenever construction is in progress. Their name(s) and telephone number(s) shall be provided to the Service at least 30 calendar days prior to groundbreaking at the project.

3. **Biological Monitor Approval and Stop Work Authority**. The qualifications of all proposed Service-approved biological monitors shall be presented to the Service for review and written approval at least 30 calendar days prior to project initiation. The Service-approved biological monitors shall keep a copy of this biological opinion in his/her possession when onsite. Through the Resident Engineer or his/her designee, the Service-approved biological monitors shall be given the authority to communicate verbally, by telephone, email, or hardcopy with Caltrans personnel, construction personnel or any other person(s) at the project site or otherwise associated with the project to ensure that the terms and conditions of this biological opinion are met. The Service-approved biologist(s) through communication with the Resident Engineer or his/her designee shall have oversight over implementation of the Terms and Conditions in this Biological Opinion, and shall have the authority to stop project activities if they determine any of the requirements associated with these Terms and Conditions are not being fulfilled. If the Service-approved biologist(s) exercises this authority, Caltrans shall immediately contact the Service's SFWO at (916) 414-6600 to report the action.

4. **Biological Monitoring.** In order to monitor whether the amount or extent of incidental take anticipated from implementation of the project is approached or exceeded, Caltrans shall adhere to the following reporting requirements. Should this anticipated amount or extent of incidental take be exceeded, Caltrans must immediately reinitiate formal consultation as per 50 CFR 402.16.

    a. For those components of the action that will result in habitat degradation or modification whereby incidental take in the form of harm is anticipated, Caltrans will provide biweekly updates to the Service with a precise accounting of the total acreage of habitat impacted. Updates shall also include any information about changes in project implementation that result in habitat disturbance not described in the Project Description and not analyzed in this Biological Opinion.

    b. For those components of the action that may result in direct encounters between listed species and project workers and their equipment whereby incidental take in the form of harassment, harm, injury, or death is anticipated, Caltrans shall immediately contact the Service's Sacramento Fish and Wildlife Office (SFWO) at (916) 414-6600 to report the encounter. If encounter occurs after normal working hours, Caltrans shall contact the SFWO at the earliest possible opportunity the next working day. When injured or killed individuals of the listed species are found, Caltrans shall follow the steps outlined in the Salvage and Disposition of Individuals section below.

    c. For those components of the action that will require the capture and relocation of any listed species, Caltrans shall immediately contact the Service's SFWO at (916) 414-6600 to report the action. If capture and relocation need to occur after normal working hours, Caltrans shall contact the SFWO at the earliest possible opportunity the next working day.

5. **Biological Monitoring Records**. The Service-approved biologist(s) shall maintain monitoring records that include: (1) the beginning and ending time of each day's monitoring effort; (2) a statement identifying the listed species encountered, including the time and location of the observation; (3) the time the specimen was identified and by whom and its condition; and (4) a description of any actions taken. The Service-approved biologist(s) shall maintain complete records in their possession while conducting monitoring activities and shall immediately surrender records to the Service, CDFW, and/or their designated agents upon request. If requested, all monitoring records shall be provided to the Service within 30 calendar days of the completion of monitoring work.

6. **Agency Access**. If verbally requested through the Resident Engineer or Construction Inspector, before, during, or upon completion of ground breaking and construction activities, Caltrans shall ensure the Service or their designated agents can immediately and without delay, access and inspect the project site for compliance with the proposed project description, conservation measures, and terms and conditions of this Biological Opinion, and to evaluate project effects to the California red-legged frog and Central California tiger salamander, and their habitat.

7. **Proper Use of Erosion Control Devices**. To prevent California red-legged frogs and Central California tiger salamanders from becoming entangled, trapped, or injured, erosion control materials that use plastic or synthetic monofilament netting will not be used within the action area. This includes products that use photodegradable or biodegradable synthetic

netting, which can take several months to decompose. Acceptable materials include natural fibers such as jute, coconut, twine or other similar fibers.

8. **Wildlife Exclusion Fencing**. Prior to the start of construction, WEF will be installed along the construction site perimeter in all areas where California red-legged frogs or Central California tiger salamanders could enter the construction area including. The location of the fencing shall be determined by the Resident Engineer and Service-approved biologist in cooperation with the Service prior to the start of staging or surface disturbing activities. A conceptual fencing plan shall be submitted to the Service for review and approval prior to WEF installation. The location, fencing materials, installation specifications, and monitoring and repair criteria shall be approved by the Service prior to start of construction. The WEF shall be a minimum of 36 inches tall and shall be buried a minimum of 4 inches deep and backfilled with soil, sand bags or other means to prevent California red-legged frogs or Central California tiger salamanders from passing under the fence and entering the project footprint. Vegetation shall be cleared to within two inches of ground level to prevent species from using vegetation to gain access to the project site by climbing over the WEF. Vegetation within 18 inches of the WEF shall remain clear during the entire time the WEF is in operation. The WEF shall consist of a material that does not allow California red-legged frogs or Central California tiger salamanders from climbing into the project site. Caltrans shall include the WEF specifications on the final project plans. Caltrans shall include the WEF specifications including installation and maintenance criteria in the bid solicitation package special provisions. The WEF shall remain in place throughout the duration of the project and shall be regularly inspected and fully maintained. Repairs to the WEF shall be made within 24 hours of discovery. Upon project completion the WEF shall be completely removed, the area cleaned of debris and trash, and returned to natural conditions.

9. **Biological Monitoring**. A Service-approved biologist(s) shall be onsite during all activities that may result in take of California red-legged frogs or Central California tiger salamanders as determined by the Service. A minimum of one Service-approved biologist shall be on-site or available by phone to respond in a timely manner throughout the project duration. Caltrans shall coordinate with the Service to determine which locations will require the presence with Service-approved biological monitors. The Service will consider the implementation of specific project activities without the oversight of an on-site Service-approved biologist on a case-by-case basis.

10. **Preconstruction and Daily Surveys**. Preconstruction surveys shall be conducted by a Service-approved biologist immediately prior to the initiation of any ground disturbing activities and vegetation clearing that may result in take of California red-legged frogs or Central California tiger salamanders as determined by the Service. All suitable aquatic and upland habitat including refugia habitat such as dense vegetation, small woody debris, refuse, burrows, etc., shall be thoroughly inspected. The Service-approved biologist(s) shall conduct clearance surveys at the beginning of each day and regularly throughout the workday when construction activities are occurring that may result in take of California red-legged frogs or Central California tiger salamanders as determined by the Service.

11. **Protocol for Species Observation and Handling**. If a California red-legged frog or Central California tiger salamander is encountered in the action area, work activities within 50 feet of the individual shall cease immediately and the Resident Engineer and Service-approved biologist shall be notified. Based on the professional judgment of the Service-approved biologist, if project activities can be conducted without killing or injuring the

California red-legged frog or Central California tiger salamander, it may be left at the location of discovery and monitored by the Service-approved biologist. All project personnel shall be notified of the finding and at no time shall work occur within 50 feet of the California red-legged frog or Central California tiger salamander without a Service-approved biologist present. Central California tiger salamanders shall not be captured or handled without authorization from the Service and CDFW, and shall be monitored until it leaves the action area on its own accord, unless the situation poses an imminent risk of injury or mortality to the individual(s). If it is determined by the Service-approved biologist that relocating the California red-legged frog is necessary, the following steps shall be followed:

a. Prior to handling and relocation, the Service-approved biologist will take precautions to prevent introduction of amphibian diseases in accordance with the *Revised Guidance on Site Assessments and Field Surveys for the California Red-legged Frog* (Service 2005). Disinfecting equipment and clothing is especially important when biologists are coming to the action area to handle amphibians after working in other aquatic habitats.

b. California red-legged frogs and Central California tiger salamanders shall be captured by hand, dipnet, or other Service-approved methodology, transported and relocated to nearby suitable habitat outside of the work area and released as soon as practicable the same day of capture. Holding/transporting containers and dipnets shall be thoroughly cleaned, disinfected, and rinsed with freshwater prior to use within the action area. The Service shall be notified within 24 hours of all capture, handling, and relocation efforts.

c. California red-legged frogs and Central California tiger salamanders shall be relocated to nearby suitable habitat outside of the work area and released in a safe area on the same side of SR-152 where they were discovered. The individual(s) shall be released within the Caltrans right-of-way if suitable habitat exists and would not pose a risk to the animal's survival or well-being. Otherwise, California red-legged frogs and Central California tiger salamanders shall be released at a location subject to the approval of the property owner. If suitable habitat cannot be identified, the Service shall be contacted to determine an acceptable alternative. If salamanders are captured from burrows, they shall be relocated to the nearest active burrow network outside of the work zone. The release burrow shall be actively occupied by ground squirrels, since inactive burrows can collapse if not maintained. No more than two individuals shall be released into the same burrow. If California red-legged frogs or Central California tiger salamanders are relocated, the Service shall be notified within 24 hours of relocation.

Reporting Requirements

In order to monitor whether the amount or extent of incidental take anticipated from implementation of the project is approached or exceeded, Caltrans shall adhere to the following reporting requirements. Should this anticipated amount or extent of incidental take be exceeded, Caltrans must reinitiate formal consultation as per 50 CFR 402.16.

1. The Service must be notified within one (1) working day of the finding of any injured or dead listed species or any unanticipated damage to its habitat associated with the proposed

project. Notification will be made to the Coast Bay Division Chief of the Endangered Species Program at the Sacramento Fish and Wildlife Office at (916) 414-6600, and must include the date, time, and precise location of the individual/incident clearly indicated on a U.S. Geological Survey 7.5 minute quadrangle or other maps at a finer scale, as requested by the Service, and any other pertinent information. When an injured or dead individual of the listed species is found, Caltrans shall follow the steps outlined in the Disposition of Individuals Taken section below.

2. Other pertinent reporting information such as monitoring reports (if not included as a term and condition), notification of project completion/implementation, etc. including when this information is due to the Service.

Disposition of Individuals Taken

Injured listed species must be cared for by a licensed veterinarian or other qualified person(s), such as the Service-approved biologist. Dead individuals must be sealed in a resealable plastic bag containing a paper with the date and time when the animal was found, the location where it was found, and the name of the person who found it, and the bag containing the specimen frozen in a freezer located in a secure site, until instruction s are received from the Service regarding the disposition of the dead specimen. The Service contact persons are the Coast Bay Division Chief of the Endangered Species Program at the Sacramento Fish and Wildlife Office at (916) 414-6600.

CONSERVATION RECOMMENDATIONS

Section 7(a)(1) of the Act directs Federal agencies to utilize their authorities to further the purposes of the Act by carrying out conservation programs for the benefit of endangered and threatened species. Conservation recommendations are discretionary agency activities to minimize or avoid adverse effects of a proposed action on listed species or critical habitat, to help implement recovery plans, or to develop information. The Service recommends the following actions:

1. Caltrans District 4 should work with the Service to develop a conservation strategy that would identify the current safe passage potential along Bay Area highways and the areas where safe passage for wildlife could be enhanced or established.

2. Caltrans should assist the Service in implementing recovery actions identified in the Draft Recovery Plan for the Least Bell's Vireo (Service 1998), Recovery Plan for the California Red-legged Frog (Service 2002), and Recovery Plan for Upland Species of the San Joaquin Valley, California (Service 1998).

3. Caltrans should consider participating in the planning for a regional habitat conservation plan for the California red-legged frog, Central California tiger salamander, and other listed and sensitive species.

4. Caltrans should consider establishing functioning preservation and creation conservation banking systems to further the conservation of the California red-legged frog, Central California tiger salamander, and other appropriate species. Such banking systems also could possibly be utilized for other required mitigation (i.e., seasonal wetlands, riparian habitats, etc.) where appropriate. Efforts should be made to preserve habitat along roadways in association with wildlife crossings.

5. Roadways can constitute a major barrier to critical wildlife movement. Therefore, Caltrans should incorporate culverts, tunnels, or bridges on highways and other roadways that allow safe passage by the California red-legged frog, Central California tiger salamander, other listed animals, and wildlife. Photographs, plans, and other information into the BAs if "wildlife friendly" crossings are incorporated into projects. Efforts should be made to establish upland culverts designed specifically for wildlife movement rather than accommodations for hydrology. Transportation agencies should also acknowledge the value of enhancing human safety by providing safe passage for wildlife in their early project design.

In order for the Service to be kept informed of actions minimizing or avoiding adverse effects or benefiting listed species or their habitats, the Service requests notification of the implementation of any conservation recommendations.

REINITIATION--CLOSING STATEMENT

This concludes formal consultation on the SR-152 Shoulder Repair Project. As provided in 50 CFR §402.16, reinitiation of formal consultation is required and shall be requested by the Federal agency or by the Service where discretionary Federal agency involvement or control over the action has been retained or is authorized by law and:

(a) If the amount or extent of taking specified in the incidental take statement is exceeded;
(b) If new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered;
(c) If the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion; or
(d) If a new species is listed or critical habitat designated that may be affected by the identified action.

If you have any questions regarding this biological opinion, please contact Jerry Roe (jerry_roe@fws.gov) or Ryan Olah (ryan_olah@fws.gov), at the letterhead address, (916) 414-6600 or by e-mail.

Sincerely,

Jennifer M. Norris
Field Supervisor

cc:
Melissa Escaron, California Department of Fish and Wildlife, Napa, California

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